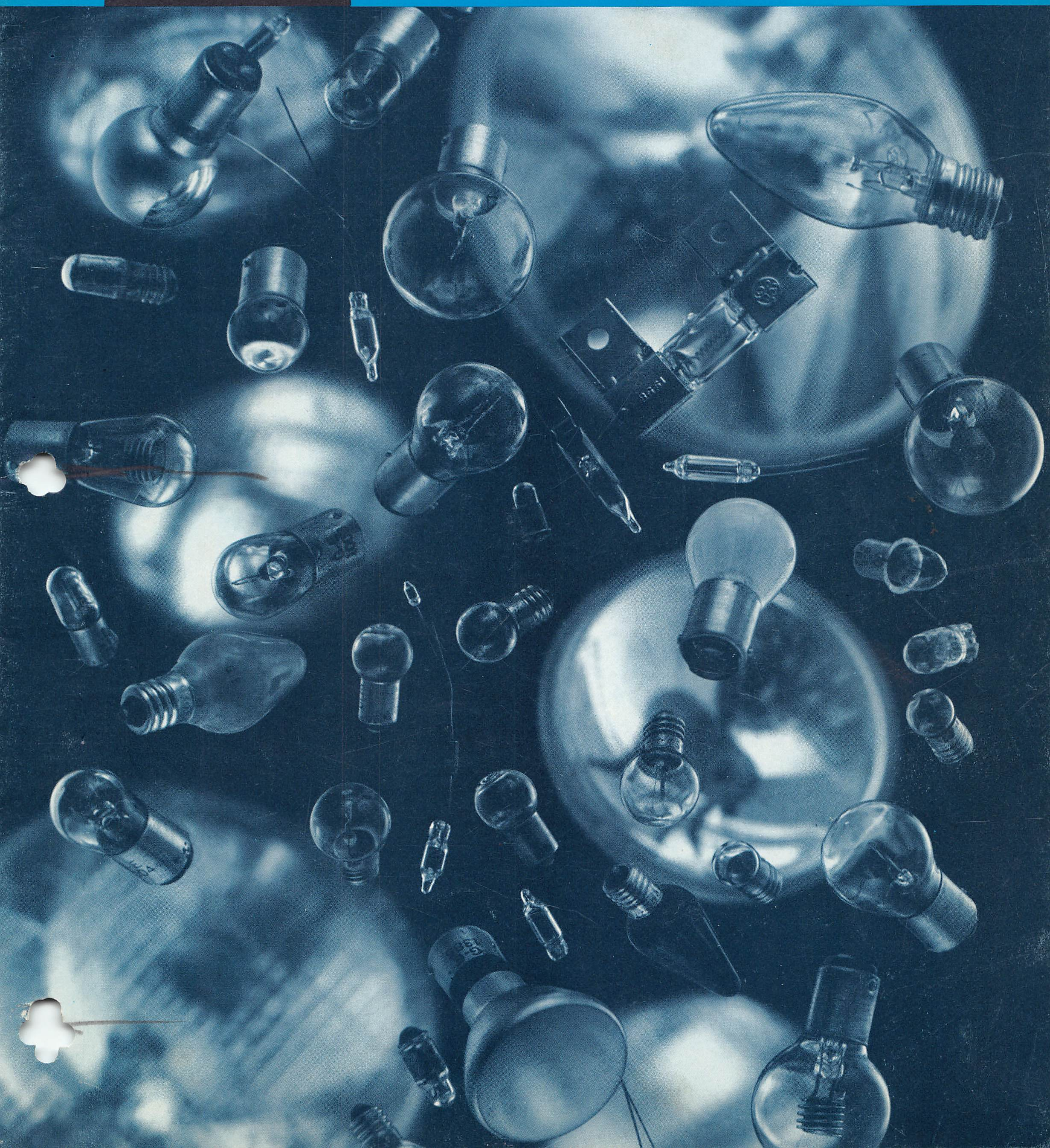
MINIATURE LAMPS

TYPES-SIZES
SPECIFICATIONS-APPLICATIONS



GENERAL ELECTRIC

CATALOG OF MINIATURE LAMPS

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FOREWORD

General Electric Miniature Lamps are designed for operation on low voltage sources of power such as battery generator systems, dry cell or storage batteries and transformers.

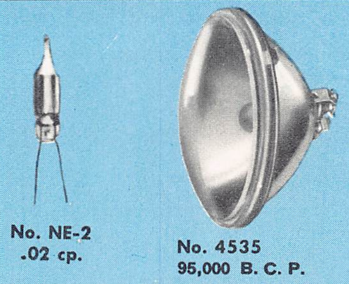
Manufacturers and designers of equipment requiring miniature lamps should select lamps of established design wherever possible in order that replacements can be obtained through regular trade channels.

Lamps are listed in the Tables of Services in numerical order and in the Specifications list according to rated voltage and design amperes in ascending order.

CONSIDER THESE FACTORS . . .
when selecting miniature lamps

Questions involving the limitations of housing space, power source, shock and vibration, life, ambient temperature and other factors should be carefully considered when choosing the lamps and the choice made *before* the design of the product is frozen.

Whether a lamp may be used to provide a safety feature, or used for convenience, utility, sales appeal, or for beauty, or as a means of saving time, General Electric has such a lamp available.

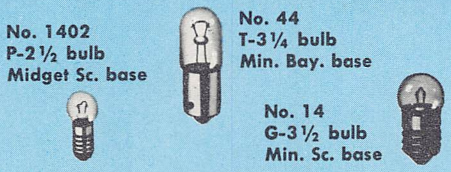


1 LIGHT quantity, quality

Where an object or surface is to be illuminated, the quantity of light required is dependent upon the size of the object, the brightness desired, the contrast with its background and the time available for seeing.

Where light must be projected, either a separate reflector or built-in reflector (sealed beam lamps) may be required and consideration given to beam candlepower and beam spread.

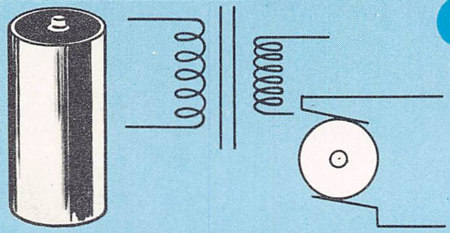
The spectral quality or color of light can be modified by translucent or transparent coatings applied to the bulb or by external filters.



2 SPACE

As size is reduced, particularly below popular radio panel lamp sizes, prices go up, while normal quality and performance are apt to go down. Where very small size is an important criterion (surgical lamps) other factors must be compromised.

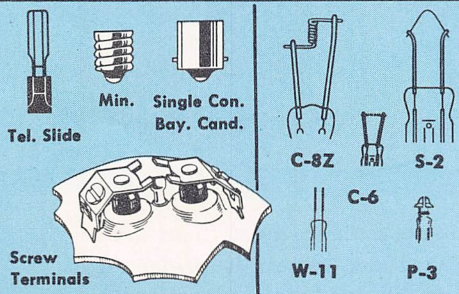
Tolerances of bulb diameters, light center length and overall length should be carefully considered by designers in specifying lamp housings.



3 POWER SOURCES

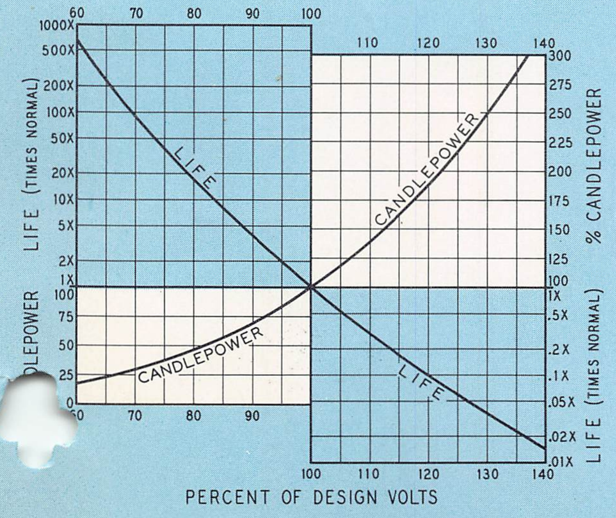
The mean effective voltage delivered by the battery or circuit is generally higher than average volts and should be the design voltage of the lamp. Design voltages for flashlight lamps have been determined by extensive tests.

With transformers or resistors, delivered rather than rated volts must be precisely known in order to obtain proper life and light. On resistor operation, because the voltage increases as the filament evaporates, life will generally be one-half that of transformer operation.



4 MECHANICAL STRENGTH

Glow lamps, having electrodes but no filaments, will withstand great amounts of shock and vibration. Low voltage, high amperage incandescent lamps rate next and high voltage low amperage lamps are least strong. Other strength factors are the resonant frequency of the lead wires, support wires and filament coil as well as filament form. Most radio panel lamps 6.3 volts and under, incorporate mounts whose resonant frequency have been synchronized with that of the coiled filament to withstand shock and vibration. Where rough service conditions are encountered, screw base lamps should be avoided where possible since they may loosen in socket.



5 LIGHT, LIFE and VOLTAGE

For any particular lamp, the light output and life are dependent upon the voltage at which the lamp is operated. For instance, as approximations the light output varies as the 3.6 power of the voltage and the life varies inversely as the 12th power of the voltage.

6 AMBIENT TEMPERATURE

It is well to consider the lamp housing from the standpoint of radiation, absorption and ventilation as well as extranious heat.

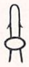
Normal variations in ambient temperature do not affect the performance of miniature lamps. Neon glow lamps can be satisfactorily operated up to 300°F. Beyond this, gas is evolved from the treated electrodes and so reduces performance. Above 350°F the solder on conventional lamps may soften, deform or melt and the basing cement loosen. The new wedge base lamps can be operated in ambients up to 600°F.

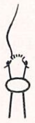
STANDARD LINE

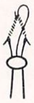
FILAMENTS

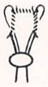
The almost universally used filament material is tungsten. The filament may be straight wire, a coil or a coiled coil (indicated respectively by the letters S, C, and CC). Coiling the wire reduces gas losses and increases efficiency. Filament designations consist of a prefix letter to indicate whether the wire is straight or coiled, and a number to indicate the arrangement of the filament on the supports.

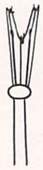
4001 = 1 FIL'
4002 - 2 FIL'
50W & 37W.

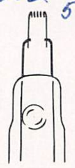

S-2

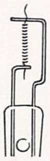

C-2R

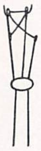

C-2V


C-2F


C-5


C-6


C-81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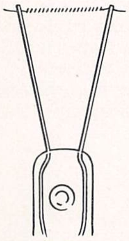
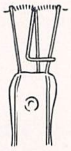
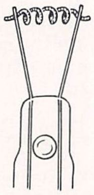
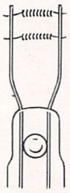
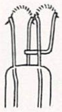
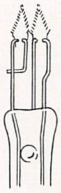

C-6

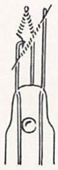

2C-6

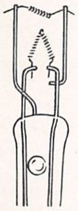

CC-6

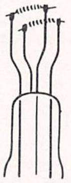

2CC-6

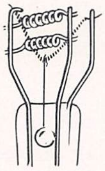

2C-2R

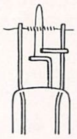

C-2V/C-2V

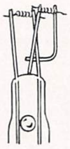

C-2V/C-12

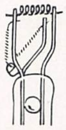

C-2V/C-6

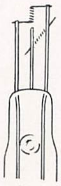

C-6/C-6


2CC-6/C-2V


C-6/S-2

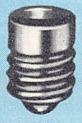

CC-6/CC-6

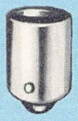

CC-6/C-2V

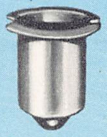

C-8Z/C-12

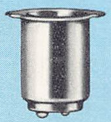
BASES

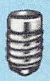
Bases provide electrical contact to the lamp and, in most cases also support the lamp in the fixture. Bayonet types are generally preferred over screw types when vibration is present. Flanged types usually are associated with requirements for filament location. Wedge base types reduce socket size and complexity.

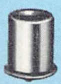

Miniature Screw

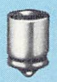

Miniature Bayonet

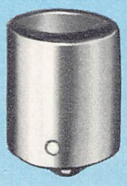

S.C. Min. Flanged

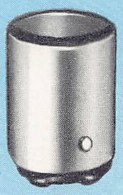

D.C. Min. Flanged

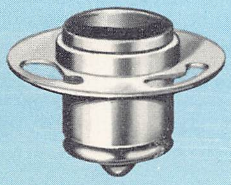

Midget Screw

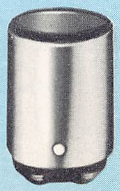

Midget Flanged


Midget Grooved

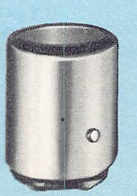

S.C. Bayonet


D.C. Bayonet


S.C. Prefocus


D.C. Indexing

1034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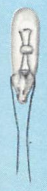
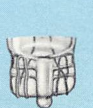
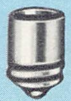
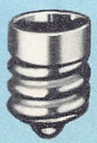

Wire


Wedge

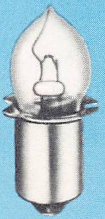

Special Thread

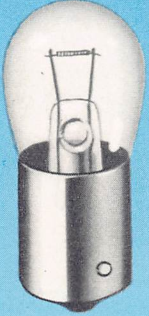

Candelabra Screw

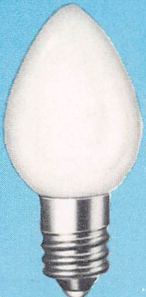
BULB SHAPES

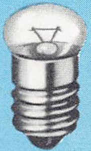
Letters in the bulb designation describe the shape of the glass section as shown below and the number is the diameter of the bulb in eighths of an inch. For example, S-8 is a straight side bulb 8/8″ or 1″ in diameter. Shapes are:

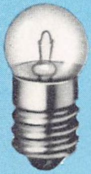
B	— Arbitrary designation
C	— Arbitrary designation
FE	— Flat end
G	— Globe shape
P	— Pear shape
R	— Reflector
RP	— Arbitrary designation
S	— Straight side
T	— Tubular
TL	— Tubular, lens end

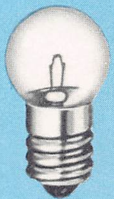

B-3½

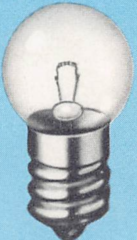

B-6

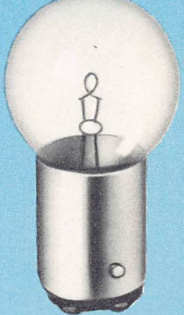

C-6

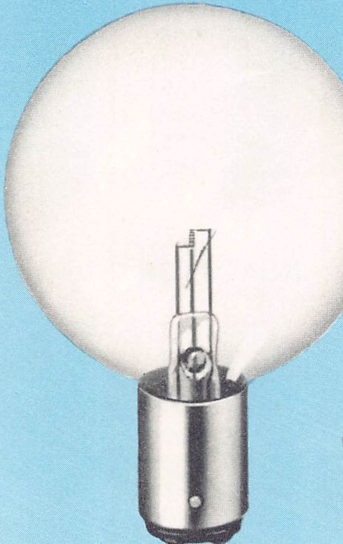

FE-3¾

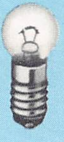

G-3½

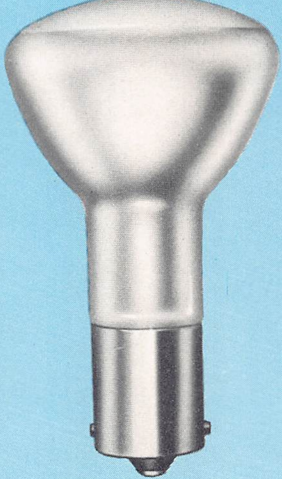

G-4½

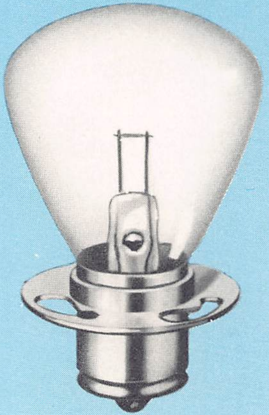

G-6

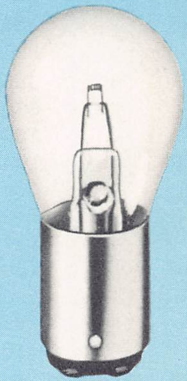

G-8

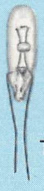

G-16½

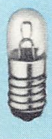

P-2½

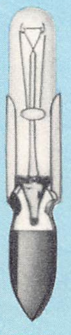

R-12

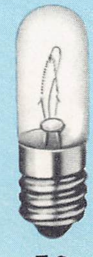

RP-11

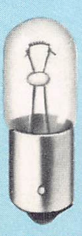

S-8


TL-1½


T-1¾


T-2


T-3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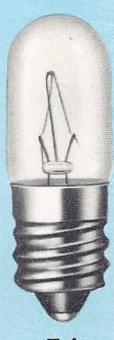
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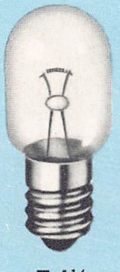
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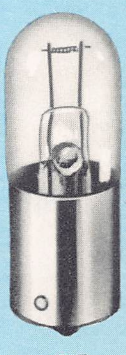
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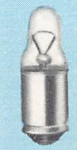
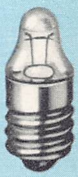

TL-1¾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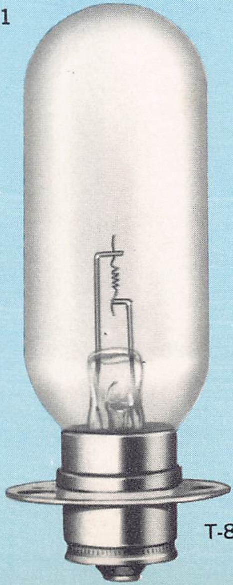
T-8

G-E MINIATURE LAMPS STANDARD LINE
TABLE OF SERVICES

AIRCRAFT

Lamp Number	Line No.	Lamp Number	Line No.
63	157	319W	56
64	158	320A	348
77	277	320B	349
78	278	320CA	350
81	150	320G	351
301	381	320P	352
301AF	373	320R	353
301R	374	320W	354
302	382	321A	355
302AF	375	321B	356
302R	376	321CA	357
303	391	321G	358
303AF	384	321P	359
303NR	385	321R	360
303R	386	321W	361
304	392	323	57
304NR	387	323R	58
304R	388	325	60
305	398	327	369
305IF	399	327AF	362
305NR	396	327R	363
305R	397	328	117
306	400	328R	114
307	409	329	38
307IF	410	330	282
307NR	404	334	370
307R	405	336	283
307SB	406	356	379
308	411	680	92
308IF	412	1047	343
308NR	407	1048X	432
308R	408	1049	431
309	417	1105	139
309IF	418	1141R	272
308NR	415	1309	401
309SB	416	1309IF	402
310	419	1312	43
311	428	1385	344
311NR	423	1495	393
311R	424	1495NR	389
311SB	425	1495R	390
312	429	1503	130
312IF	430	1662	421
312NR	426	1666	413
312R	427	1666IF	414
313	383	1680	124
313NR	377	1683	342
313R	378	1813R	303
315	420	1816	276
316	120	1816R	275
319	50	1819	367
319A	51	1819NR	368
319B	52	1820	372
319G	53	1843	347
319P	54	1958	345
319R	55	1959	346

AUTOMOTIVE

Lamp Number	Line No.	Lamp Number	Line No.
PR16	221	1141	236
51	159	1141 IF	237
53	268	1142	238
53G	265	1142 IF	239
53R	266	1143	222
55	156	1144	223
57	256	1154	145
57X	257	1158	146
63	157	1170	147
64	158	1176	241
67	253	1183	128
67B	252	1188	131
68	254	1195	224
81	150	1196	225
82	151	1203	340
87	154	1204	341
88	155	1209	134
89	250	1247	263
90	251	1251	336
93	231	1252	337
93 IF	232	1271	334
94	233	1275	335
94 IF	234	1321	137
158	258	1323	138
209	152	1327	247
210	153	1383	249
257	259	1445	308
623	338	1447	309
631	264	1501	129
1002	144	1503	130
1003	229	1507	226
1004	230	1683	342
1005	235	1691	339
1016	240	1788	148
1022	141	1789	260
1026	248	1816	276
1034	244	1881	269
1044	245	1888	149
1073	242	1889	261
1074	246	1891	255
1076	243	1892	267
1105	139	1893	262
1124	227	2330	140
1129	142	2331	132
1130	143	2336	228
1133	135	2530	133
1134	136		

BICYCLE

Lamp Number	Line No.	Lamp Number	Line No.
131	7	1483	112
1482	119		

COIN MACHINE

Lamp Number	Line No.	Lamp Number	Line No.
63	157	1488	285
81	150	1489	193
1458	319	1829	371
1487	292		

FLASHLIGHT

Lamp Number	Line No.	Lamp Number	Line No.
PR2	27	123	4
PR3	64	222	19
PR4	22	222X	20
PR5	26	223	21
PR6	33	224	18
PR7	67	233	24
PR8	12	243	25
PR9	49	245	30
PR12	106	246	72
PR18	200	263	28
13	68	263X	46
14	31	359	10
31	162	365	66
112	2	404W	23
113	8	605	163
114	1		

HAND LANTERN

Lamp Number	Line No.	Lamp Number	Line No.
PR13	84	502	98
PR17	86	503	99
27	87	965	208
35	41	1021	83
136	6	1491	29
248	42	1492	44
407	88	1553	85
408	89	1651	95
425	91		

INDICATOR

Lamp Number	Line No.	Lamp Number	Line No.
40	171	349	173
41	39	454	90
43	40	455	186
44	176	509	332
46	177	509K	333
47	172	509KAF	331
51	159	1224K	437
53	268	1406	110
63K	198	1426	452
63M	199	1426B	453
67K	280	1426G	454
67M	281	1426R	455
71K	322	1426Y	456
71M	323	1450	328
81K	187	1471	219
89K	279	1476	311
93K	271	1477	330
159	169	1479	286
324	59	1480	310
331	9	1705	284
335	364	1730	111
338	47	1738	48
342	108	1757	326
344	209	1762	365
345	109	1764	366
346	306	1769	34

INDICATOR (cont.)

Lamp Number	Line No.	Lamp Number	Line No.
1776	447	1841	329
1779	107	1842	438
1784	116	1844	450
1785	433	1847	170
1786	446	1868	305
1787	451	1869	210
1796	434	1870	327
1799	448	1891	255
1815	293	2100	14
1819	367	2102	307
1821	380	2107	211
1822	443	2112	174
1828	444	2114	113
1829	371		

INSTRUMENTS

COLORIMETER

1759	160	1763	161

DEFLECTION GALVANOMETER

851K	73

MICROSCOPE ILLUMINATOR

419	204	1594	125
870	205	1615	126
1493	194	1629	192
1493D	189	1630	195
1497	190	1634	320
1498	191		

OSCILLOGRAPH

855K	75	1922	78
856	76	1923	212
865	121	1924	79
1613	122	1925	213
1621	166	1926	215
1872	65	1927	217
1875	97	1928	216
1901	81	1960	214
1903	82		

PHOTOCELL EXCITER

1699	127

SEISMOGRAPH

853	74	857	80

INSTRUMENTS (cont.)

OTHER

Lamp Number	Line No.	Lamp Number	Line No.
55	156	1612	101
57	256	1619	196
57X	257	1632	197
251	32	1637	70
253	37	1874	71
337	115	1936	325
1600	69	2101	36
1611	100		

MARINE

64	158	1224	436
68	254	1226	439
82	151	1228	440
88	155	1238	441
90	251	1638	422
94	233	1692	403
624	394	1696	395
1223	435		

MEDICAL

153	104	1460	188
157	105		

RADIO and TELEVISION

40	171	239	178
41	39	1490	63
42	61	1800	11
44	176	1809	13
45	62	1813	302
46	177	1847	170
47	172	1855	179
48	15	1866	175
49	16	1881	269
53	268	1891	255
159	169	1892	267

SEARCHLIGHT

958	103	1019	273
976	220	1020	274
1017	93	1025	123
1018	94	1184	102

SIGNAL

Lamp Number	Line No.	Lamp Number	Line No.
405	185	1850	96
423	5	1867	77
455	186		

SPECIAL SERVICE

Lamp Number	Line No.	
6	183	Sewing Machine
6 IF	184	Sewing Machine
8	206	Sewing Machine
8 IF	207	Sewing Machine
71	321	
72	324	
352	17	
1000	164	
1240	442	
1325	167	Photoelectric Scanner
1383	249	Telephone Trouble
1605	180	Facsimile Recorder
1606	182	Foul-line Detector
1608	181	Photoelectric Scanner
1620	165	Photoelectric Scanner
1774	304	Telephone Trouble

TOY, TRAIN

Lamp Number	Line No.	Lamp Number	Line No.
50	203	432G	312
50G	201	432R	313
50R	202	433	317
257	259	433G	314
258	300	433R	315
363	294	461	301
363G	287	1402	289
363R	288	1442	318
401	3	1445	308
406	45	1446	218
428	270	1447	309
430	298	1449	295
431	299	1449G	290
431G	296	1449R	291
431R	297	1767	35
432	316	1768	118

Lamps are listed in numerical sequence in each table. When a given lamp has significant usage in, or has been designed for more than one service, it is listed in all appropriate tables.

Since voltage is an important factor in selecting a lamp for a given service, it is well to bear in mind when using the foregoing tables that the lower voltage lamps have the lower line numbers.

ELECTRICAL SPECIFICATIONS

PHYSICAL SPECIFICATIONS

Line No.	Lamp Number	Rated Volts	Design Volts	Design Amps	Batteries	C.P. or Watts (Approx.)	Rated avg. lab. Life (Hrs.)	Bulb	Base	Filament	Light Center Length (Inch.)	Max. Over-all Length (Inch.)
1	**114**	**1.2**	......	**.20**	**1AAA**	....	**5**	**TL-2¾**	**Special**	**S-2**	......	**⅞**
2	**112**	**1.2**	......	**.22**	**1AA**	**.09C**	**5**	**TL-3**	**Min. Sc.**	**S-2**	**⅞**	**59/64**
3	401	1.25	......	.22	1D	....	15	G-4½	Min. Sc.	S-2	......	1 1/16
4	**123**	**1.25**	......	**.30**	**1D**	**10C**	**10**	**G-3½**	**Min. Sc.**	**S-2**	**23/32**	**15/16**
5	423	1.25	......	.60	1 #6	.2C	75	G-4½	Min. Bay.	S-2	½	1 1/16
6	**136**	**1.25**	......	**.60**	**1 #6**	**.2C**	**75**	**G-4½**	**Min. Sc.**	**S-2**	**¾**	**1 1/16**
7	**131**	**1.3**	......	**.10**	**1D**	**.03C**	**50**	**G-3½**	**Min. Sc.**	**S-2**	**23/32**	**15/16**
8	**113**	**1.3**	......	**.22**	**1D**	....	**15**	**TL-3**	**Min. Sc.**	**S-2**	......	**59/64**
9	331	1.35	......	.06	....	.006C	500	T-1¾	S.C. Midg. Flg.	C-6	⅜	⅝
10	359	1.35	......	.06	1D	.02C	50	G-3½	Min. Sc.	S-2	23/32	15/16
11	1800	1.35	......	.06	1 #6	.009C	500	T-3¼	Min. Sc.	S-2	......	1 3/16
12	PR8	1.9	......	.60	2V	....	10	B-3½	S.C. Min. Flg.	C-2R	¼	1¼
2 TO 2½ VOLTS												
13	1809	2.0	......	.06	....	.02C	1000	T-3¼	Min. Bay.	C-6	¾	1 3/16
14	2100	2.0	......	.06	....	.04C	1000	T-3¼	Wire Term.	S-2	......	1.053
15	**48**	**2.0**	......	**.06**	....	**.04C**	**1000**	**T-3¼**	**Min. Sc.**	**S-2**	......	**1 3/16**
16	**49**	**2.0**	......	**.06**	....	**.04C**	**1000**	**T-3¼**	**Min. Bay.**	**S-2**	......	**1 3/16**
17	352	2.0	......	.06	....	.30C	2000	G-3½	Min. Sc.	S-2	......	15/16
18	**224**	**2.15**	......	**.22**	**2AAA**	....	**5**	**TL-2¾**	**Special**	**C-6**	......	**⅞**
19	**222**	**2.25**	......	**.25**	**2AA**	....	**5**	**TL-3**	**Min. Sc.**	**C-6**	......	**59/64**
20	222X	2.25	......	.25	2AA	....	5	TL-3	Min. Sc.	C-6	......	59/64
21	223	2.25	......	.25	2AA	.38C	5	FE-3¾	Min. Sc.	C-6	21/32	13/16
22	PR4	2.33	......	.27	2C	.40C	10	B-3½	S.C. Min. Flg.	C-2R	¼	1¼
23	404W	2.33	......	.27	2C	....	10	C-6	Min. Sc.	C-2R	......	2⅛
24	**233**	**2.33**	......	**.27**	**2C**	**.42C**	**10**	**G-3½**	**Min. Sc.**	**C-2R**	**23/32**	**15/16**
25	**243**	**2.33**	......	**.27**	**2C**	....	**10**	**TL-3**	**Min. Sc.**	**C-6**	......	**59/64**
26	PR5	2.35	......	.35	2D	.45C	35	B-3½	S.C. Min. Flg.	C-2R	¼	1¼
27	**PR2**	**2.38**	......	**.50**	**2D**	**.80C**	**15**	**B-3½**	**S.C. Min. Flg.**	**C-2R**	**¼**	**1¼**
28	**263**	**2.4**	......	**.35**	**2D**	**.52C**	**45**	**G-3½**	**Min. Sc.**	**C-2R**	**23/32**	**15/16**
29	**1491**	**2.4**	......	**.80**	**2 #6**	**1.30C**	**75**	**G-8**	**D.C. Bay.**	**S-2**	**⅞**	**1¾**
30	**245**	**2.46**	......	**.50**	**2D**	**.90C**	**15**	**G-3½**	**Min. Sc.**	**C-2R**	**23/32**	**15/16**
31	14	2.47	......	.30	2D	**.50C**	15	G-3½	Min. Sc.	C-2R	23/32	15/16
32	251	2.47	......	.30	....	....	30	T-1¾	S.C. Midg. Flg.	C-2R	⅜	⅝
33	**PR6**	**2.47**	......	**.30**	**2D**	**.45C**	**30**	**B-3½**	**S.C. Min. Flg.**	**C-2R**	**¼**	**1¼**
2½ TO 3 VOLTS												
34	1769	2.5	......	.20	....	.20C	500	T-1¾	Midg. Sc.	C-2R	½	11/16
35	**1767**	**2.5**	......	**.20**	....	**.20C**	**500**	**T-1¾**	**Midg. Sc.**	**C-2R**	**½**	**19/32**
36	2101	2.5	......	.30	....	....	15	TL-1½	Wire Term.	C-2R	......	.545
37	253	2.5	......	.35	....	....	Long	TL-1¾	Midg. Grooved	C-2R	......	11/16
38	329	2.5	......	.40	....	.55C	30	T-1¼	Special	C-2R	7/16	17/32
39	41	2.5	......	.50	....	**.50C**	3000	T-3¼	Min. Sc.	C-2R	31/32	1 3/16
40	43	2.5	......	.50	....	**.50C**	3000	T-3¼	Min. Bay.	C-2R	25/32	1 3/16
41	35	2.5	......	.80	2 #6	1.3C	150	G-5½	Min. Sc.	C-2R	⅞	1¼
42	**248**	**2.5**	......	**.80**	**2 #6**	....	**150**	**G-5½**	**Min. Sc.**	**S-2**	**⅞**	**1¼**
43	1312	2.5	......	1.00	....	1.5C	20	G-5	S.C. Bay.	C-6	11/16	1⅜
44	1492	2.5	......	1.50	2 #6	3.2C	15	S-8	D.C. Bay.	S-2	15/16	2
45	**406**	**2.6**	......	**.30**	**2D**	**.43C**	**50**	**G-4½**	**Min. Sc.**	**C-2R**	**⅞**	**1 1/16**
46	**263X**	**2.65**	......	**.30**	**2D**	**.52C**	**30**	**G-3½**	**Min. Sc.**	**C-2R**	**23/32**	**15/16**
47	338	2.7	......	.06	....	.04C	500	T-1¾	S.C. Midg. Flg.	C-2R	⅜	⅝
48	1738	2.7	......	.06	....	.04C	500	T-1¾	Wire Term.	C-2R	......	.520

Bold Face Indicates High Demand Type

"Rated" volts is voltage of the circuit in which lamps are designed to be operated; "Design" volts the voltage at which the lamp is designed for average ampere, candlepower and rated laboratory life characteristics. They are the same unless shown separately in the specifications data.

ELECTRICAL SPECIFICATIONS								PHYSICAL SPECIFICATIONS				
Line No.	Lamp Number	Rated Volts	Design Volts	Design Amps	Bat-teries	C.P. or Watts (Approx.)	Rated avg. lab. Life (hrs.)	Bulb	Base	Fila-ment	Light Center Length (Inch.)	Max. Over-all Length (Inch.)
49	PR9	2.7	......	.15	2D	.25C	45	B-3½	S.C. Min. Flg.	C-2R	¼	1¼
3 TO 4 VOLTS												
50	319	3	......	.19	....	....	350	T-1¼	Special	C-2R	15/32	¾
51	319A	3	......	.19	....	....	350	T-1¼	Special	C-2R	15/32	¾
25	319B	3	......	.19	....	....	350	T-1¼	Special	C-2R	15/32	¾
53	319G	3	......	.19	....	....	350	T-1¼	Special	C-2R	15/32	¾
54	319P	3	......	.19	....	....	350	T-1¼	Special	C-2R	15/32	¾
55	319R	3	......	.19	....	....	350	T-1¼	Special	C-2R	15/32	¾
56	319W	3	......	.19	....	....	350	T-1¼	Special	C-2R	15/32	¾
57	323	3	......	.19	....	.25C	350	T-1¼	Special	C-2R	11/64	35/64
58	323R	3	......	.19	....	....	350	T-1¼	Special	C-2R	11/64	35/64
59	324	3	......	.19	....	.25C	350	T-1¼	Wire Term.	C-2R	......	.438
60	325	3	......	.19	....	.25C	350	T-1¼	Special	C-2R	7/16	17/32
61	42	3.2	......	.35	....	.50C	3000	T-3¼	Min. Sc.	C-2R	31/32	1 3/16
62	45	3.2	......	.35	....	.50C	3000	T-3¼	Min. Bay.	C-2R	25/32	1 3/16
63	1490	3.2	......	.16	....	.20C	3000	T-3¼	Min. Bay.	C-2R	25/32	1 3/16
64	PR3	3.57	......	.50	3D	1.5C	15	B-3½	S.C. Min. Flg.	C-2R	¼	1¼
65	1872	3.6	......	1.80	....	3.4C	400	T-5	S.C. Pref. (A)	S-8	1¼	2⅜
66	365	3.69	......	.50	3D	1.6C	15	G-3½	Min. Sc.	C-2R	23/32	15/16
67	PR7	3.7	......	.30	3D	.90C	30	B-3½	S.C. Min. Flg.	C-2R	¼	1¼
68	13	3.7	......	.30	3D	.98C	15	G-3½	Min. Sc.	C-2R	23/32	15/16
69	1600	3.7	......	2.75	....	11C	100	S-8	D.C. Bay.	C-6	1¼	2
70	1637	3.7	......	2.75	....	11C	100	S-8	S.C. Pref. (A)	C-6	1⅛	2
71	1874	3.7	......	2.75	....	....	100	T-5	S.C. Bay.	C-6	1⅛	1¾
72	246	3.8	......	.22	3D	....	20	TL-3	Min. Sc.	C-6	......	59/64
4 TO 5 VOLTS												
73	851K	4	......	.5	....	....	200	G-10	Cand. Sc.	S-6	1⅜	2
74	853	4	......	.5	....	....	200	G-10	S.C. Bay.	S-6	......	2⅛
75	855K	4	......	2.5	....	....	100	G-10	Cand. Sc.	S-6	1 5/16	2
76	856	4	......	2.5	....	....	100	G-10	D.C. Bay.	S-6	1 3/16	2⅛
77	1867	4	......	.06	....	.06C	Long	T-3¼	Min. Bay.	C-6	¾	1 3/16
78	1922	4	......	2.50	....	....	100	T-8	D.C. Bay.	S-6	1 5/32	2 3/16
79	1924	4	......	2.50	....	....	100	T-8	D.C. Pref. (A)	S-6	1½	3⅛
80	857	4.2	......	3.7	....	....	120	G-10	S.C. Bay.	S-6	......	2⅛
81	1901	4.2	......	3.7	....	....	120	T-6	S.C. Bay.	S-8	2	3⅛
82	1903	4.2	......	3.7	....	....	120	T-6	S.C. Pref. (A)	S-8	1⅞	3⅛
83	1021	4.5	......	1.25	4 #6	....	75	RP-11	S.C. Pref. (B)	C-6	⅞	2¼
84	PR13	4.75	......	.50	4F	....	15	B-3½	S.C. Min. Flg.	C-2R	¼	1¼
85	1553	4.75	......	1.00 1.00	8F	5C	100 100	S-8	D.C. Bay.	C-6/ S-2	1⅛	2
86	PR17	4.9	......	.30	4F	1.2C	30	B-3½	S.C. Min. Flg.	C-2R	¼	1¼
87	27	4.9	......	.30	4F	1.4C	30	G-4½	Min. Sc.	C-2R	23/32	1 1/16
88	407	4.9	......	.30	4F	.70C	50②	G-4½	Min. Sc.	C-2R	13/16	1 1/16
89	408	4.9	......	.30	4F	.70C	50②	G-4½	Min. Bay.	C-2R	⅝	1 1/16
90	454	4.9	......	.30	....	....	30	G-4½	Min. Bay.	C-2R	½	1 1/16
5 TO 6 VOLTS												
91	425	5	......	.50	4F	2.3C	15	G-4½	Min. Sc.	C-2R	23/32	1 1/16
92	680	5	......	.06	....	....	Long	T-1	Wire Term.	C-2R	......	¼
93	1017	5	......	12.4	....	100C	100	G-16½	S.C. Bay.	C-2V	1 9/16	3
94	1018	5	......	12.4	....	100C	100	G-16½	D.C. Bay.	C-2V	1 9/16	3

② Average Useful Life

"Rated" volts is voltage of the circuit in which lamps are designed to be operated; "Design" volts the voltage at which the lamp is designed for average ampere, candlepower and rated laboratory life characteristics. They are the same unless shown separately in the specifications data.

ELECTRICAL SPECIFICATIONS								PHYSICAL SPECIFICATIONS				
Line No.	Lamp Number	Rated Volts	Design Volts	Design Amps	Bat-teries	C.P. or Watts	Rated avg. lab. Life (hrs.)	Bulb	Base	Fila-ment	Light Center Length (Inch.)	Max. Over-all Length (Inch.)
95	**1651**	**5**	......	**.60**	**4F**	**3C**	**20**	**S-8**	**S.C. Bay.**	**C-2R**	**1⅛**	**2**
96	**1850**	**5**	......	**.09**	....	**.25C**	**1500**	**T-3¼**	**Min. Bay.**	**C-2R**	**⅝**	**1 3/16**
97	1875	5	......	4.0	....	28C	100	T-5	S.C. Bay.	C-8I	1¼	2⅜
98	**502**	**5.1**	......	**.15**	**4F**	**.6C①**	**100**	**G-4½**	**Min. Sc.**	**C-2R**	**23/32**	**1 1/16**
99	503	5.1	......	.15	4F	.60C①	100	G-4½	Min. Bay.	C-2R	½	1 1/16
100	1611	5.4	......	1.86	....	10C	1000	S-8	S.C. Bay.	C-6	1¼	2
101	1612	5.4	......	1.86	....	10C	1000	S-8	D.C. Bay.	C-6	1¼	2
102	**1184**	**5.5**	......	**6.25**	....	**50C**	**100**	**RP-11**	**D.C. Bay.**	**C-2V**	**1¼**	**2¼**
103	958	5.5 6.0	......	2.00 0.82	....	14C① 5C①	50 100	G-16½	D.C. Bay.	C-8Z/ C-12	1¼	3
104	153	5.8	......	1.10	....	7.9C	50	G-6	Min. Sc.	C-6	......	1 7/32
105	157	5.8	......	1.10	....	7.9C	50	G-6	Min. Sc.	C-2R	31/32	1 7/32
106	**PR12**	**5.95**	......	**.50**	**5D**	**3.1C①**	**15**	**B-3½**	**S.C. Min. Flg.**	**C-2R**	**¼**	**1¼**
6 VOLT												
107	1779	6	......	.035- .045	....	....	Long	T-2	Wire Trem.	C-2V	......	1.25
108	342	6	......	.04	....	.03C	1000	T-1¾	Midg. Sc.	C-2V	½	11/16
109	345	6	......	.04	....	.03C	1000	T-1¾	S.C. Midg. Flg.	C-2V	⅜	⅝
110	1406	6	......	.04	....	.10C	500	G-4½	Min. Bay.	C-6	⅝	1 1/16
111	1730	6	......	.04	....	.03C	1000	T-1¾	Wire Term.	C-2V	......	.520
112	**1483**	**6**	......	**.04**	....	**.1C①**	**500**	**G-4½**	**Min. Sc.**	**C-6**	**13/16**	**1 1/16**
113	2114	6	......	.06	....	....	3000	T-1¼	Wire Term.	C-2R	......	.438
114	328R	6	......	.20	....	....	1000	T-1¾	S.C. Midg. Flg.	C-6	......	⅝
115	337	6	......	.20	....	.63C	500	T-1¾	Midg. Grooved	C-6	⅜	⅝
116	1784	6	......	.20	....	.34C	1000	T-1¾	Wire Term.	C-6	......	.520
117	**328**	**6**	......	**.20**	....	**.34@5V**	**1000**	**T-1¾**	**S.C. Midg. Flg.**	**C-6**	**⅜**	**⅝**
118	**1768**	**6**	......	**.20**	....	**.63C①**	**500**	**T-1¾**	**Midg. Sc.**	**C-6**	**½**	**19/32**
119	**1482**	**6**	......	**.45**	....	**2.2C①**	**100**	**G-4½**	**Min. Sc.**	**C-2R**	**13/16**	**1 1/16**
120	316	6	......	.70	....	3.4C	500	T-3¼	Min. Bay.	C-2R	⅝	1 3/16
121	865	6	......	1.0	....	9.3C	3	G-10	S.C. Bay.	C-6	1⅜	2⅛
122	1613	6	......	1.5	....	13C	50	S-8	S.C. Bay.	C-6	1¼	2
123	1025	6	......	2.35	6 #6	19C	75	RP-11	S.C. Pref. (B)	C-6	⅞	2¼
124	1680	6	......	4.10	....	32C	300	S-8	S.C. Bay.	C-6	1¼	2
125	1594	6	......	5.0	....	36C	250	S-8	D.C. Bay.	C-6	1¼	2
126	1615	6	......	5.0	....	36C	250	S-8	S.C. Pref. (B)	C-6	⅞	2
127	1699	6	......	5.7	....	32C	2000	RP-11	S.C. Bay.	C-2V	1¼	2¼
128	1183	6	5.5	6.25	....	50C	100	RP-11	S.C. Bay.	C-2V	1¼	2¼
129	1501	6	5.9	6.36	....	50C	200	RP-11	S.C. Pref. (B)	C-6	⅞	2¼
130	1503	6	5.9	6.53	....	50C	200	RP-11	S.C. Pref. (B)	C-2V	⅞	2¼
131	1188	6	5.5 6.2	6.18 3.87	....	50C 32C	100 125	RP-11	D.C. Bay.	C-2V C-2V	1¼	2¼
132	2331	6	5.9 6.2	4.66 4.49	....	32C 32C	400 400	RP-11	D.C. Pref. (S)	C-6 C-6	1.176	2¼
133	2530	6	5.9 6.2	6.53 4.23	....	50C 32C	200 200	RP-11	D.C. Pref. (A)	C-2V C-2V	1⅛	2¼
134	1209	6	6.1	4.10	....	32C	125	RP-11	S.C. Pref. (B)	C-6	⅞	2¼
135	**1133**	**6**	**6.2**	**3.91**	....	32C	**200**	**RP-11**	**S.C. Bay.**	**C-2R**	**1¼**	**2¼**
136	1134	6	6.2	3.91	....	32C	200	RP-11	D.C. Bay.	C-2R	1¼	2¼
137	1321	6	6.2	4.10	....	32C	200	RP-11	S.C. Pref. (B)	C-6	⅞	2¼
138	1323	6	6.2	4.13	....	32C	200	RP-11	S.C. Pref. (B)	C-2V	⅞	2¼
139	1105	6	6.2	5.72	....	50C	125	RP-11	S.C. Bay.	C-2V	1¼	2¼

① Approximate ② Average useful life

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ELECTRICAL SPECIFICATIONS								PHYSICAL SPECIFICATIONS				
Line No.	Lamp Number	Rated Volts	Design Volts	Design Amps	Batteries	C.P. or Watts	Rated avg. lab. Life (hrs.)	Bulb	Base	Filament	Light Center Length (Inch.)	Max. Over-all Length (Inch.)
140	2330	6	6.2 6.2	4.23 4.23	....	32C 32C	200 200	RP-11	D.C. Pref. (A)	C-2V C-2V	1⅛	2¼
141	1022	6	6.2 6.4	4.49 2.69	....	32C 21C	300 300	RP-11	D.C. Pref. (S)	C-2V C-6	1⅛	2¼
142	**1129**	**6**	**6.4**	**2.63**	....	**21C**	**200**	**S-8**	**S.C. Bay.**	**C-6**	**1¼**	**2**
143	**1130**	**6**	**6.4**	**2.63**	....	**21C**	**200**	**S-8**	**D.C. Bay.**	**C-6**	**1¼**	**2**
144	1002	6	6.4 6.4	2.69 2.69	....	21C 21C	200 200	S-8	D.C. Bay.	C-2V C-2V	1¼	2
145	**1154**	**6**	**6.4 7.0**	**2.63 .75**	....	**21C 3C**	**200 1000**	**S-8**	**D.C. Index.**	**C-6 C-6**	**1¼**	**2**
146	**1158**	**6**	**6.4 7.0**	**2.63 .75**	....	**21C 3C**	**200 1000**	**S-8**	**D.C. Bay.**	**C-6 C-6**	**1¼**	**2**
147	1170	6	6.4 7.0	2.69 1.03	....	21C 6C	200 1000	S-8	D.C. Bay.	C-2V C-12	1¼	2
148	1788	6	7.0	.50	....	2C	1500	T-3¼	Wire Term.	C-2R	......	......
149	1888	6	7.0	.50	....	2C	1500	T-3¼	Min. Bay.	C-2R	9/16	1 3/16
150	81	6	6.5	1.02	....	6C	500	G-6	S.C. Bay.	C-2R	¾	1 7/16
151	**82**	**6**	**6.5**	**1.02**	....	**6C**	**500**	**G-6**	**D.C. Bay.**	**C-2R**	**¾**	**1 7/16**
152	**209**	**6**	**6.5**	**1.78**	....	**15C**	**100**	**B-6**	**S.C. Bay.**	**C-6**	**1 1/16**	**1¾**
153	**210**	**6**	**6.5**	**1.78**	....	**15C**	**100**	**B-6**	**D.C. Bay.**	**C-6**	**1 1/16**	**1¾**
154	**87**	**6**	**6.8**	**1.91**	....	**15C**	**300**	**S-8**	**S.C. Bay.**	**C-2R**	**1⅛**	**2**
155	**88**	**6**	**6.8**	**1.91**	....	**15C**	**300**	**S-8**	**D.C. Bay.**	**C-2R**	**1⅛**	**2**
156	**55**	**6**	**7.0**	**.41**	....	**2C**	**500**	**G-4½**	**Min. Bay.**	**C-2R**	**9/16**	**1 1/16**
157	**63**	**6**	**7.0**	**.63**	....	**3C**	**1000**	**G-6**	**S.C. Bay.**	**C-2R**	**¾**	**1 7/16**
158	**64**	**6**	**7.0**	**.63**	....	**3C**	**1000**	**G-6**	**D.C. Bay.**	**C-2R**	**¾**	**1 7/16**
159	51	6	7.5	.22	....	1C	1000	G-3½	Min. Bay.	C-2R	½	1 5/16
6.1 TO 7 VOLTS												
160	1759	6.1	......	4.10	....	32C	125	S-11	S.C. Pref. (B)	C-8Z	⅞	2⅜
161	**1763**	**6.1**	......	**4.10**	....		**125**	**S-11**	**S.C. Pref. (B)**	**C-6**	**⅞**	**2⅜**
162	**31**	**6.15**	......	**.30**	**5D**	**2C**	**15**	**G-4½**	**Min. Sc.**	**C-2R**	**23/32**	**1 1/16**
163	**605**	**6.15**	......	**.50**	**5D**		**15**	**G-4½**	**Min. Sc.**	**C-2R**	**23/32**	**1 1/16**
164	1000	6.2	......	3.87 3.87	....		125 125	RP-11	D.C. Bay.	C-2V C-2V	1¼	2¼
165	1620	6.2	......	3.91	....	....	200	RP-11	D.C. Bay.	C-2V	1¼	2¼
166	1621	6.2	......	3.91	....	....	200	RP-11	S.C. Bay.	C-2V	1¼	2¼
167	1325	6.2	......	4.13	....	....	200	RP-11	S.C. Pref. (B)	C-2V	⅞	2¼
168	1775	6.3	......	.075	....	.23C	500	T-1¾	Midg. Sc.	C-2R	½	1 9/32
169	159	6.3	......	.15	....	.38C	Long	T-3¼	Wedge	C-2R	½	1 1/16
170	**1847**	**6.3**	......	**.15**	....		**Long**	**T-3¼**	**Min. Bay.**	**C-2R**	**25/32**	**1 3/16**
171	**40**	**6.3**	......	**.15**	....		**3000**	**T-3¼**	**Min. Sc.**	**C-2R**	**31/32**	**1 3/16**
172	**47**	**6.3**	......	**.15**	....		**3000**	**T-3¼**	**Min. Bay.**	**C-2R**	**25/32**	**1 3/16**
173	349	6.3	......	.20	....	.55C	3000	T-1¾	S.C. Midg. Flg.	C-2R	⅜	⅝
174	2112	6.3	......	.20	....	....	3000	T-1¾	Wire Term.	C-2R	......	.520
175	1866	6.3	......	.25	....	.65C	Long	T-3¼	Min. Bay.	C-2R	25/32	1 3/16
176	**44**	**6.3**	......	**.25**	....		**3000**	**T-3¼**	**Min. Bay.**	**C-2R**	**25/32**	**1 3/16**
177	**46**	**6.3**	......	**.25**	....		**3000**	**T-3¼**	**Min. Sc.**	**C-2R**	**31/32**	**1 3/16**
178	239	6.3	......	.36	....	.67C	Long	T-3¼	Min. Bay.	C-2R	.600	1 3/16
179	1855	6.3	......	.80	....	3.6C	3000	T-4½	Min. Bay.	C-2R	23/32	1⅜
180	1605	6.4	......	2.69	....	21C	200	S-8	S.C. Bay.	C-2V	1¼	2
181	1608	6.4	......	2.69	....	21C	200	S-8	D.C. Bay.	C-2V	1¼	2
182	**1606**	**6.4**	......	**2.69**	....	....	**200**	**S-8**	**D.C. Index.**	**C-6**	**1¼**	**2**
183	**6**	**6.4**	......	**3.00**	....	**23C①**	**500**	**S-8**	**D.C. Bay.**	**C-2R**	**1¼**	**2**

① Approximate

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ELECTRICAL SPECIFICATIONS								PHYSICAL SPECIFICATIONS				
Line No.	Lamp Number	Rated Volts	Design Volts	Design Amps	Bat-teries	C.P. or Watts	Rated avg. lab. Life (hrs.)	Bulb	Base	Fila-ment	Light Center Length (Inch.)	Max. Over-all Length (Inch.)
184	**61F**	**6.4**	......	**3.00**	....	**23C①**	**500**	**S-8**	**D.C. Bay.**	**C-2R**	**1¼**	**2**
185	405	6.5	......	.50	....	1.9C	500②	G-4½	Min. Sc.	C-2R	13/16	1 1/16
186	**455**	**6.5**	......	**.50**	....	**1.9C**	**500②**	**G-4½**	**Min. Bay.**	**C-2R**	**9/16**	**1 1/16**
187	81K	6.5	......	1.02	....	6C	500	G-6	Cand. Sc.	C-2R	15/16	1⅜
188	1460	6.5	......	2.75	....	23C	100	S-8	D.C. Pref. (A)	C-6	1¼	2
189	1493D	6.5	......	2.75	....	....	100	S-8	D.C. Bay.	C-6	1⅛	2
190	1497	6.5	......	2.75	....	23C	100	S-8	D.C. Bay.	C-6	1⅛	2
191	1498	6.5	......	2.75	....	23C	100	S-8	D.C. Bay.	C-6	1⅛	2
192	1629	6.5	......	2.75	....	23C	100	S-8	S.C. Bay.	C-6	1⅛	2
193	**1489**	**6.5**	......	**2.75**	....	**25C**	**125**	**T-5**	**S.C. Bay.**	**C-6**	**1⅛**	**1¾**
194	**1493**	**6.5**	......	**2.75**	....	**22.5C①**	**100**	**S-8**	**D.C. Bay.**	**C-6**	**1⅛**	**2**
195	**1630**	**6.5**	......	**2.75**	....	**23C①**	**100**	**S-8**	**D.C. Pref. (A)**	**C-6**	**1**	**2**
196	1619	6.7	......	1.96	....	23C①	500	S-8	S.C. Bay.	C-6	1⅛	2
197	1632	6.8	......	1.70	....	15C	150	S-8	D.C. Bay.	C-2R	1⅛	2
7 TO 11 VOLTS												
198	63K	7	......	.63	....	3C	1000	G-6	Cand. Sc.	C-2R	15/16	1⅜
199	63M	7	......	.63	....	3C	1000	G-6	Min. Sc.	C-2R	⅞	1 5/16
200	PR18	7.2	......	.55	6D	5.5C	......	B-3½	S.C. Min. Flg.	C-2R	¼	1¼
201	**50G**	**7.5**	......	**.22**	....	....	**1000**	**G-3½**	**Min. Sc.**	**C-2R**	......	**15/16**
202	**50R**	**7.5**	......	**.22**	....	....	**1000**	**G-3½**	**Min. Sc.**	**C-2R**	......	**15/16**
203	**50**	**7.5**	......	**.22**	....	**1C**	**1000**	**G-3½**	**Min. Sc.**	**C-2R**	**23/32**	**15/16**
204	419	8	......	.60	....	4.9C	50	G-4½	Min. Sc.	CC-6	......	1 1/16
205	870	8	......	.90	....	....	50	T-4½	Min. Sc.	C-6	......	1⅜
206	**8**	**8**	......	**2.20**	....	**20C**	**500**	**S-8**	**D.C. Bay.**	**C-2R**	**1¼**	**2**
207	**81F**	**8**	......	**2.20**	....	**20C**	**500**	**S-8**	**D.C. Bay.**	**C-2R**	**1¼**	**2**
208	**965**	**9.84**	......	**.50**	**8D or 8F**	**6C①**	**15**	**T-4½**	**Min. Sc.**	**C-2R**	**23/32**	**1⅜**
209	344	10	......	.0112-.0168	....	.002C	Long	T-1¾	S.C. Midg. Flg.	C-2F	⅜	⅝
210	1869	10	......	.0112-.0168	....	....	Long	T-1¾	Wire Term.	C-2F	......	.520
211	2107	10	......	.04	....	....	Long	T-1¾	Wire Term.	C-2V	......	.520
212	1923	10	......	3.50	....	38C	500	T-8½	S.C. Pref. (A)	S-8	1 15/16	4⅛
213	1925	10	......	3.50	....	....	500	T-8½	D.C. Pref. (A)	S-8	2 5/16	4⅛
214	1960	11	......	....	....	60W	1000	T-4	Tab	CC-8	¾	2¼
215	1926	11	......	1.00	....	....	200	T-8	D.C. Pref. (A)	C-6	1½	3⅛
216	1928	11	......	1.00	....	....	200	T-8	D.C. Pref. (A)	C-8 I	1½	3⅛
217	1927	11 11	......	1.00 1.00	....	....	200 200	T-8	D.C. Pref. (A)	C-6 C-6	1½ 1 13/32	3⅛
12 VOLTS												
218	**1446**	**12**	......	**.20**	....	**1.7C①**	**250**	**G-3½**	**Min. Sc.**	**C-2V**	......	**15/16**
219	**1471**	**12**	......	**.26**	....	**2.3C①**	**250**	**G-6**	**Cand. Sc.**	**C-2V**	**15/16**	**1⅜**
220	976	12	......	6.00	....	130C	50	G-16½	D.C. Bay.	C-6	1¼	3
221	**PR-16**	**12**	**12.5**	**.25**	....	**2.7C**	**50**	**B-3½**	**S.C. Min. Flg.**	**C-2R**	**¼**	**1¼**
222	**1143**	**12**	**12.5**	**1.98**	....	....	**400**	**RP-11**	**S.C. Bay.**	**C-2R**	**1¼**	2¼
223	1144	12	12.5	1.98	....	32C	400	RP-11	D.C. Bay.	C-2R	1¼	2¼
224	1195	12	12.5	3.00	....	50C	300	RP-11	S.C. Bay.	C-2V	1¼	2¼
225	1196	12	12.5	3.00	....	50C	300	RP-11	D.C. Bay.	C-2V	1¼	2¼
226	1507	12	12.5	3.00	....	50C	300	RP-11	S.C. Pref. (B)	C-2V	⅞	2¼
227	1124	12	12.5 12.5	1.92 1.92	....	32C 32C	300 300	RP-11	D.C. Bay.	C-2R C-2R	1¼	2¼

① Approximate ② Average Useful Life

"Rated" volts is voltage of the circuit in which lamps are designed to be operated; "Design" volts the voltage at which the lamp is designed for average ampere, candlepower and rated laboratory life characteristics. They are the same unless shown separately in the specifications data.

ELECTRICAL SPECIFICATIONS

PHYSICAL SPECIFICATIONS

Line No.	Lamp Number	Rated Volts	Design Volts	Design Amps	Bat-teries	C.P. or Watts	Rated avg. lab. Life (hrs.)	Bulb	Base	Fila-ment	Light Center Length (Inch.)	Max. Over-all Length (Inch.)
228	2336	12	12.5 12.5	2.23 2.10	....	32C 32C	300 300	RP-11	D.C. Pref. (A)	C-2V C-2R	1 1/8	2 1/4
229	1003	12	12.8	.94	....	15C	100	B-6	S.C. Bay.	C-6	1 1/16	1 3/4
230	1004	12	12.8	.94	....	15C	100	B-6	D.C. Bay.	C-6	1 1/16	1 3/4
231	93	12	12.8	1.04	....	15C	500	S-8	S.C. Bay.	C-2R	1 1/8	2
232	93IF	12	12.8	1.04	....	15C	500	S-8	S.C. Bay.	C-2R	1 1/8	2
233	94	12	12.8	1.04	....	15C	500	S-8	D.C. Bay.	C-2R	1 1/8	2
234	94IF	12	12.8	1.04	....	15C	500	S-8	D.C. Bay.	C-2R	1 1/8	2
235	1005	12	12.8 12.8	1.26 1.26	....	21C 21C	300 300	S-8	D.C. Bay.	C-2R C-2R	1 1/4	2
236	1141	12	12.8	1.34	....	21C	500	S-8	S.C. Bay.	C-6	1 1/4	2
237	1141IF	12	12.8	1.34	....	21C	500	S-8	S.C. Bay.	C-6	1 1/4	2
238	1142	12	12.8	1.34	....	21C	500	S-8	D.C. Bay.	C-6	1 1/4	2
239	1142IF	12	12.8	1.34	....	21C	500	S-8	D.C. Bay.	C-6	1 1/4	2
240	1016	12	12.8 14.0	1.34 .59	....	21C 6C	200 1000	S-8	D.C. Index.	C-6 C-6	1 1/4	2
241	1176	12	12.8 14.0	1.34 .59	....	21C 6C	200 1000	S-8	D.C. Bay.	C-6 C-6	1 1/4	2
242	1073	12	12.8	1.80	....	32C	200	S-8	S.C. Bay.	C-6	1 1/4	2
243	1076	12	12.8	1.80	....	32C	200	S-8	D.C. Bay.	C-6	1 1/4	2
244	1034	12	12.8 14.0	1.80 .51	....	32C 4C	200 Long	S-8	D.C. Index.	C-6 C-6	1 1/4	2
245	1044	12	12.8 12.8	1.85	....	35w 32C	300 200	RP-11	D.C. Pref. (S)	C-6 C-6	1 1/8	2 1/4
246	1074	12	12.8 14.0	.51	....	35w 4C	80③ Long	RP-11	D.C. Pref. (B)	C-6 C-6	7/8	2 1/4
247	1327	12	12.8	2.08	....	32C	300	RP-11	S.C. Pref. (B)	C-2V	7/8	2 1/4
248	1026	12	12.8 12.8	2.18 1.85	....	32C 32C	300 200	RP-11	D.C. Pref. (S)	C-2V C-6	1 1/8	2 1/4
249	1383	12	13	....	....	20w	300	R-12	S.C. Bay.	C-8	......	2 5/8
250	89	12	13	.58	....	6C	750	G-6	S.C. Bay.	C-2R	3/4	1 7/16
251	90	12	13	.58	....	6C	750	G-6	D.C. Bay.	C-2R	3/4	1 7/16
252	67B	12	13.5	.59	....	....	Long③	G-6	S.C. Bay.	C-2R	......	1 7/16
253	67	12	13.5	.59	....	4C	Long③	G-6	S.C. Bay.	C-2R	13/16	1 7/16
254	68	12	13.5	.59	....	4C	Long③	G-6	D.C. Bay.	C-2R	13/16	1 7/16
255	1891	12	14	.2C	....	2C	500	T-3 1/4	Min. Bay.	C-2F	5/8	1 3/16
256	57	12	14	.2C	....	2C	500	G-4 1/2	Min. Bay.	9/16	1/2	1 1/16
257	57X	12	14	.24	....	2C	500	G-4 1/2	Min. Bay.	C-2F	9/16	1 1/16
258	158	12	14	.24	....	2C	500	T-3 1/4	Wedge	C-2V	1/2	1 1/16
259	257	12	14	.27	....	....	500②	G-4 1/2	Min. Bay.	C-2R	9/16	1 1/16
260	1789	12	14	.27	....	2C	1500	T-3 1/4	Wire Term.	C-2F	......	......
261	1889	12	14	.27	....	2C	1500	T-3 1/4	Min. Bay.	C-2F	9/16	1 3/16
262	1893	12	14	.33	....	2C①	Long	T-3 1/4	Min. Bay.	C-2F	5/8	1 3/16
263	1247	12	14	.48	....	3C	Long	G-6	S.C. Bay.	2C-2R	3/4	1 7/16
264	631	12	14	.63	....	6C	1000	G-6	S.C. Bay.	2C-2R	3/4	1 7/16
265	53G	12	14.4	.12	....	....	1000	G-3 1/2	Min. Bay.	C-2V	......	15/16
266	53R	12	14.4	.12	....	....	1000	G-3 1/2	Min. Bay.	C-2V	......	15/16
267	1892	12	14.4	.12	....	.75C①	1000	T-3 1/4	Min. Bay.	C-2F	5/8	1 3/16
268	53	12	14.4	.12	....	1C	1000	G-3 1/2	Min. Bay.	C-2V	1/2	15/16
269	1881	12	15.5	.24	....	2.2C	500	T-3 1/4	Min. Bay.	C-2F	5/8	1 3/16
12.5 TO 14.5 VOLTS												
270	428	12.5	......	.25	....	2.4C①	250	G-4 1/2	Min. Sc.	C-2V	23/32	1 1/16

① Approximate ② Average Useful Life ③ at 14 Volts

"Rated" volts is voltage of the circuit in which lamps are designed to be operated; "Design" volts the voltage at which the lamp is designed for average ampere, candlepower and rated laboratory life characteristics. They are the same unless shown separately in the specifications data.

ELECTRICAL SPECIFICATIONS								PHYSICAL SPECIFICATIONS				
Line No.	Lamp Number	Rated Volts	Design Volts	Design Amps	Bat-teries	C.P. or Watts	Rated avg. lab. Life (hrs.)	Bulb	Base	Fila-ment	Light Center Length (Inch.)	Max. Over-all Length (Inch.)
271	93K	12.8	......	1.01	....	15C	500	S-8	Cand. Sc.	C-2R	1 7/16	2
272	1141R	12.8	......	1.34	....	....	500	S-8	S.C. Bay.	C-6	1¼	2
273	1019	12.8	......	4.75	....	100C	100	G-16½	S.C. Bay.	C-2V	1¼	3
274	1020	12.8	......	4.75	....	100C	100	G-16½	D.C. Bay.	C-2V	1¼	3
275	1816R	13	......	.33	....	....	1000	T-3¼	Min. Bay.	C-2V	⅝	1 3/16
276	**1816**	**13**	......	**.33**	....	**3C①**	**1000**	**T-3¼**	**Min. Bay.**	**C-2V**	**⅝**	**1 3/16**
277	77	13	......	.37	....	3C	1000	G-5	S.C. Bay.	C-2V	11/16	1⅜
278	78	13	......	.37	....	3C	1000	G-5	D.C. Bay.	C-2V	11/16	1⅜
279	89K	13	......	.53	....	6C	750	G-6	Cand. Sc.	C-2R	15/16	1⅜
280	**67K**	**13.5**	......	**.41**	....	**4C**	**1500**	**G-6**	**Cand. Sc.**	**C-2R**	**1**	**1⅜**
281	67M	13.5	......	.41	....	4C	1500	G-6	Min. Sc.	C-2R	15/16	1 5/16
282	330	14	......	.08	....	.50C①	750	T-1¾	S.C. Midg. Flg.	C-2F	⅜	⅝
283	336	14	......	.08	....	.50C	750	T-1¾	Midg. Groove	C-2F	⅜	⅝
284	1705	14	......	.08	....	.50C	750	T-1¾	Wire Term.	C-2F	......	.520
285	**1488**	**14**	......	**.15**	....	**1.5C①**	**200**	**T-3¼**	**Min. Bay.**	**C-2V**	**⅝**	**1 3/16**
286	1479	14	......	.17	....	1.7C	250	T-4	Cand. Sc.	C-2V	15/16	1½
287	**363G**	**14**	......	**.20**	....	....	**250**	**G-3½**	**Min. Bay.**	**C-2V**	......	**15/16**
288	**363R**	**14**	......	**.20**	....	....	**250**	**G-3½**	**Min. Bay.**	**C-2V**	......	**15/16**
289	**1402**	**14**	......	**.20**	....	....	**500**	**P-2½**	**Midg. Sc.**	**C-6**	**17/32**	**21/32**
290	1449G	14	......	.20	....	....	250	G-3½	Min. Sc.	C-2V	......	15/16
291	**1449R**	**14**	......	**.20**	....	....	**250**	**G-3½**	**Min. Sc.**	**C-2V**	......	**15/16**
292	**1487**	**14**	......	**.20**	....	**1.4C①**	**3000**	**T-3¼**	**Min. Sc.**	**C-2V**	**15/16**	**1 3/16**
293	**1815**	**14**	......	**.20**	....	**1.4C**	**3000**	**T-3¼**	**Min. Bay.**	**C-2V**	**¾**	**1 3/16**
294	**363**	**14**	......	**.20**	....	**2C①**	**250**	**G-3½**	**Min. Bay.**	**C-2V**	......	**15/16**
295	**1449**	**14**	......	**.20**	....	**2C①**	**250**	**G-3½**	**Min. Sc.**	**C-2V**	......	**15/16**
296	431G	14	......	.25	....	....	250	G-4½	Min. Bay.	C-2V	......	1 1/16
297	**431R**	**14**	......	**.25**	....	....	**250**	**G-4½**	**Min. Bay.**	**C-2V**	......	**1 1/16**
298	**430**	**14**	......	**.25**	....	**2.7C**	**250**	**G-4½**	**Min. Sc.**	**C-2V**	**23/32**	**1 1/16**
299	**431**	**14**	......	**.25**	....	**2.7C**	**250**	**G-4½**	**Min. Bay.**	**C-2V**	**½**	**1 1/16**
300	258	14	......	.27	....	....	500②	G-4½	Min. Sc.	C-2R	25/32	1 1/16
301	**461**	**14**	......	**.33**	....	**4C①**	**250**	**G-5**	**Min. Sc.**	**C-2R**	**13/16**	**1⅛**
302	1813	14.4	......	.10	....	.86C	1000	T-3¼	Min. Bay.	C-2V	⅝	1 3/16
303	1813R	14.4	......	.10	....	....	1000	T-3¼	Min. Bay.	C-2V	⅝	1 3/16
15 TO 24 VOLTS												
304	1774	16	......	.13	....	....	1500	T-2	Tel. Slide	C-21	......	1 11/16
305	1868	18	......	.035-.045	....	....	Long	T-2	Wire Term.	C-2V	......	1.250
306	346	18	......	.04	....	.15C	1000	T-1¾	Midg. Groove	C-2F	⅜	⅝
307	2102	18	......	.04	....	.15C	1000	T-1¾	Wire Term.	C-2F	......	.520
308	**1445**	**18**	......	**.15**	....	**1.5C①**	**250**	**G-3½**	**Min. Bay.**	**C-2V**	**½**	**15/16**
309	**1447**	**18**	......	**.15**	....	**1.5C①**	**250**	**G-3½**	**Min. Sc.**	**C-2V**	**23/32**	**15/16**
310	1480	18	......	.17	....	2.2C	250	T-4	Cand. Sc.	C-2V	15/16	1½
311	**1476**	**18**	......	**.17**	....	**2.2C①**	**250**	**T-3**	**Min. Sc.**	**C-2V**	**13/16**	**1¼**
312	**432G**	**18**	......	**.25**	....	....	**250**	**G-4½**	**Min. Sc.**	**C-2V**	......	**1 1/16**
313	**432R**	**18**	......	**.25**	....	....	**250**	**G-4½**	**Min. Sc.**	**C-2V**	......	**1 1/16**
314	433G	18	......	.25	....	....	250	G-4½	Min. Bay.	C-2V	......	1 1/16
315	433R	18	......	.25	....	....	250	G-4½	Min. Bay.	C-2V	......	1 1/16
316	**432**	**18**	......	**.25**	....	**3.5C①**	**250**	**G-4½**	**Min. Sc.**	**C-2V**	**23/32**	**1 1/16**
317	**433**	**18**	......	**.25**	....	**3.5C①**	**250**	**G-4½**	**Min. Bay.**	**C-2V**	**½**	**1 1/16**
318	1442	18	......	.25	....	....	250	C-6	Min. Sc.	C-2V	......	1

① Approximate ② Average useful life

"Rated" volts is voltage of the circuit in which lamps are designed to be operated; "Design" volts the voltage at which the lamp is designed for average ampere, candlepower and rated laboratory life characteristics. They are the same unless shown separately in the specifications data.

ELECTRICAL SPECIFICATIONS								PHYSICAL SPECIFICATIONS				
Line No.	Lamp Number	Rated Volts	Design Volts	Design Amps	Bat- teries	C.P. or Watts	Rated avg. lab. Life (hrs.)	Bulb	Base	Fila- ment	Light Center Length (Inch.)	Max. Over-all Length (Inch.)
319	**1458**	**20**	......	**.25**	....	**4.2C①**	**250**	**G-5**	**Min. Bay.**	**C-2V**	**⅝**	**1³⁄₁₆**
320	**1634**	**20**	......	**1.00**	....	**24C**	**200**	**S-8**	**D.C. Pref. (A)**	**CC-6**	**1¼**	**2**
321	71	22	......	.18	....	3C	200	G-6	S.C. Bay.	C-2V	¾	1⁷⁄₁₆
322	**71K**	**22**	......	**.18**	....	**3C**	**200**	**G-6**	**Cand. Sc.**	**C-2V**	**¹⁵⁄₁₆**	**1⅜**
323	71M	22	......	.18	....	3C	200	G-6	Min. Sc.	C-2V	⅞	1⁵⁄₁₆
324	**72**	**22**	......	**.18**	....	**3C**	**200**	**G-6**	**D.C. Bay.**	**C-2V**	**¾**	**1⁷⁄₁₆**
325	1936	22	......	1.00	....	28C	200	T-8	D.C. Pref. (A)	C-6	1½	3⅛
326	1757	24	......	.025- .035	....	....	Long	T-2	Wire Term.	C-21	......	1.250
327	1870	24	......	.025- .035	....	....	Long	T-2	Wire Term.	C-21	......	1.250
328	1450	24	......	.035	....	.23C	3000	G-3½	Min. Bay.	C-2V	½	¹⁵⁄₁₆
329	1841	24	......	.17	....	3.3C	250	T-4	Cand. Sc.	C-2V	¹⁵⁄₁₆	1½
330	**1477**	**24**	......	**.17**	....	**3.3C①**	**250**	**T-3**	**Min. Sc.**	**C-2V**	**¹³⁄₁₆**	**1¼**
331	509KAF	24	......	.18	....	....	1000	G-6	Cand. Sc.	C-2F	¹³⁄₁₆	1⅜
332	509	24	......	.18	....	2.8C①	1000	G-6	S.C. Bay.	C-2F	¾	1⁷⁄₁₆
333	**509K**	**24**	......	**.18**	....	**2.8C①**	**1000**	**G-6**	**Cand. Sc.**	**C-2F**	**¹⁵⁄₁₆**	**1⅜**
334	1271	24	25.6	1.34	....	40C	500	RP-11	S.C. Pref. (B)	2C-2R	⅞	2¼
335	1275	24	28 28	....	.93 .34	32C 6C	400 1000	S-8	D.C. Bay.	CC-6 C-2V	1¼	2
336	**1251**	**24**	**28**	**.23**	....	**3C**	**Long**	**G-6**	**S.C. Bay.**	**2C-2V**	**¾**	**1⁷⁄₁₆**
337	1252	24	28	.23	....	3C	Long	G-6	D.C. Bay.	2C-2V	¾	1⁷⁄₁₆
338	623	24	28	.37	....	6C	1000	G-6	S.C. Bay.	2C-2V	¾	1⁷⁄₁₆
339	1691	24	28	.61	....	15C	1000	S-8	S.C. Bay.	2C-2R	1⅛	2
340	1203	24	28	.71	....	21C	400	S-8	S.C. Bay.	C-2V	1¼	2
341	1204	24	28	.71	....	21C	400	S-8	D.C. Bay.	C-2V	1¼	2
342	**1683**	**24**	**28**	**1.02**	....	**32C**	**500**	**S-8**	**S.C.Bay.**	**2C-6**	**1¼**	**2**
26 TO 28 VOLTS												
343	**1047**	**26**	......	**2.70**	....	**105C①**	**25**	**RP-11**	**S.C. Bay.**	**2CC-6**	**1¼**	**2¼**
344	**1385**	**28**	......	....	....	**20W**	**300**	**R-12**	**S.C. Bay.**	**CC-8**	......	**2⅝**
345	1958	28	......	....	....	150W	300	T-4	Tab	CC-8	¾	2¼
346	1959	28	......	....	....	150W	300	T-4	Tab	CC-8	¾	2¼
347	1843	28	......	.022	....	.25C	3000	T-3¼	Min. Bay.	C-2V	⅝	1³⁄₁₆
348	**320A**	**28**	......	**.04**	....	....	**1000**	**T-1¾**	**Special**	**C-2F**	......	**¾**
349	**320B**	**28**	......	**.04**	....	....	**1000**	**T-1¾**	**Special**	**C-2F**	......	**¾**
350	**320CA**	**28**	......	**.04**	....	....	**1000**	**T-1¾**	**Special**	**C-2F**	......	**¾**
351	**320G**	**28**	......	**.04**	....	....	**1000**	**T-1¾**	**Special**	**C-2F**	......	**¾**
352	**320P**	**28**	......	**.04**	....	....	**1000**	**T-1¾**	**Special**	**C-2F**	......	**¾**
353	**320R**	**28**	......	**.04**	....	....	**1000**	**T-1¾**	**Special**	**C-2F**	......	**¾**
354	**320W**	**28**	......	**.04**	....	....	**1000**	**T-1¾**	**Special**	**C-2F**	......	**¾**
355	**321A**	**28**	......	**.04**	....	....	**1000**	**T-1¾**	**Special**	**C-2F**	......	**¹⁵⁄₁₆**
356	**321B**	**28**	......	**.04**	....	....	**1000**	**T-1¾**	**Special**	**C-2F**	......	**¹⁵⁄₁₆**
357	**321CA**	**28**	......	**.04**	....	....	**1000**	**T-1¾**	**Special**	**C-2F**	......	**¹⁵⁄₃₂**
358	**321G**	**28**	......	**.04**	....	....	**1000**	**T-1¾**	**Special**	**C-2F**	......	**¹⁵⁄₁₆**
359	**321P**	**28**	......	**.04**	....	....	**1000**	**T-1¾**	**Special**	**C-2F**	......	**¹⁵⁄₁₆**
360	**321R**	**28**	......	**.04**	....	....	**1000**	**T-1¾**	**Special**	**C-2F**	......	**¹⁵⁄₁₆**
361	**321W**	**28**	......	**.04**	....	....	**1000**	**T-1¾**	**Special**	**C-2F**	......	**¹⁵⁄₁₆**
362	327AF	28	......	.04	....	....	1000	T-1¾	S.C. Midg. Flg.	C-2F	......	⅝
363	327R	28	......	.04	....	....	1000	T-1¾	S.C. Midg. Flg.	C-2F	......	⅝
364	335	28	......	.04	....	.34C	1000	T-1¾	Midg. Sc.	C-2F	½	1¹⁄₁₆

① Approximate

"Rated" volts is voltage of the circuit in which lamps are designed to be operated; "Design" volts the voltage at which the lamp is designed for average ampere, candlepower and rated laboratory life characteristics. They are the same unless shown separately in the specifications data.

ELECTRICAL SPECIFICATIONS								PHYSICAL SPECIFICATIONS				
Line No.	Lamp Number	Rated Volts	Design Volts	Design Amps	Bat-teries	C.P. or Watts	Rated avg. lab. Life (hrs.)	Bulb	Base	Fila-ment	Light Center Length (Inch.)	Max. Over-all Length (Inch.)
365	1762	28	......	.04	....	.34C	1000	T-1¾	Wire Term.	C-2F	......	.520
366	1764	28	......	.04	....	.34C	1000	T-1¾	Wire Term.	C-2F	......	.520
367	**1819**	**28**	......	**.04**	....	**.34C①**	**1000**	**T-3¼**	**Min. Bay.**	**C-2F**	**⅝**	**1³⁄₁₆**
368	1819NR	28	......	.04	....	....	1000	T-3¼	Min. Bay.	C-2F	⅝	1³⁄₁₆
369	**327**	**28**	......	**.04**	....	**.34C**	**1000**	**T-1¾**	**S.C. Midg. Flg.**	**C-2F**	**⅜**	**⅝**
370	**334**	**28**	......	**.04**	....	**.34C**	**1000**	**T-1¾**	**Midg. Groove**	**C-2F**	**⅜**	**⅝**
371	**1829**	**28**	......	**.07**	....	**1.1C①**	**1000**	**T-3¼**	**Min. Bay.**	**C-2F**	**⅝**	**1³⁄₁₆**
372	**1820**	**28**	......	**.10**	....	**1.6C①**	**1000**	**T-3¼**	**Min. Bay.**	**C-2F**	**⅝**	**1³⁄₁₆**
373	**301AF**	**28**	......	**.17**	....	....	**500**	**G-5**	**S.C. Bay.**	**C-2F**	......	**1⅜**
374	301R	28	......	.17	....	....	500	G-5	S.C. Bay.	C-2F	......	1⅜
375	302AF	28	......	.17	....	....	500	G-5	D.C. Bay.	C-2F	......	1⅜
376	302R	28	......	.17	....	....	500	G-5	D.C. Bay.	C-2F	......	1⅜
377	313NR	28	......	.17	....	....	500	T-3¼	Min. Bay.	C-2F	⅝	1³⁄₁₆
378	**313R**	**28**	......	**.17**	....	....	**500**	**T-3¼**	**Min. Bay.**	**C-2F**	......	**1³⁄₁₆**
379	356	28	......	.17	....	3.5C①	500	G-3½	Min. Bay.	C-2V	½	¹⁵⁄₁₆
380	1821	28	......	.17	....	3.5C	500	T-3¼	Min. Sc.	C-2F	¹³⁄₁₆	1³⁄₁₆
381	**301**	**28**	......	**.17**	....	**3C**	**500**	**G-5**	**S.C. Bay.**	**C-2F**	**¹¹⁄₁₆**	**1⅜**
382	302	28	......	.17	....	3C	500	G-5	D.C. Bay.	C-2F	¹¹⁄₁₆	1⅜
383	**313**	**28**	......	**.17**	....	**3.5C①**	**500**	**T-3¼**	**Min. Bay.**	**C-2F**	**⅝**	**1³⁄₁₆**
384	303AF	28	......	.30	....	....	500	G-6	S.C. Bay.	C-2F	......	1⁷⁄₁₆
385	303NR	28	......	.30	....	....	500	G-6	S.C. Bay.	C-2F	¾	1⁷⁄₁₆
386	303R	28	......	.30	....	....	500	G-6	S.C. Bay.	C-2F	¾	1⁷⁄₁₆
387	304NR	28	......	.30	....	....	500	G-6	D.C. Bay.	C-2F	¾	1⁷⁄₁₆
388	304R	28	......	.30	....	....	500	G-6	D.C. Bay.	C-2F	¾	1⁷⁄₁₆
389	1495NR	28	......	.30	....	....	500	T-4½	Min. Bay.	C-2F	⅝	1⅜
390	1495R	28	......	.30	....	....	500	T-4½	Min. Bay.	C-2F	......	1⅜
391	303	28	......	.30	....	6C	500	G-6	S.C. Bay.	C-2F	¾	1⁷⁄₁₆
392	**304**	**28**	......	**.30**	....	**6C**	**500**	**G-6**	**D.C. Bay.**	**C-2F**	**¾**	**1⁷⁄₁₆**
393	1495	28	......	.30	....	6C	500	T-4½	Min. Bay.	C-2F	⅝	1⅜
394	624	28	......	.37	....	6C	1000	G-6	D.C. Bay.	2C-2V	¾	1⁷⁄₁₆
395	1696	28	......	.40	....	10C	500	S-8	D.C. Bay.	C-2V	1¼	2
396	305NR	28	......	.51	....	....	300	S-8	S.C. Bay.	C-2V	1⅛	2
397	305R	28	......	.51	....	....	300	S-8	S.C. Bay.	C-2V	......	2
398	**305**	**28**	......	**.51**	....	**15C**	**300**	**S-8**	**S.C. Bay.**	**C-2V**	**1⅛**	**2**
399	305IF	28	......	.51	....	15C	300	S-8	S.C. Bay.	C-2V	1⅛	2
400	306	28	......	.51	....	15C	300	S-8	D.C. Bay.	C-2V	1⅛	2
401	1309	28	......	.52	....	15C	300	B-6	S.C. Bay.	2C-2R	1¹⁄₁₆	1¾
402	1309IF	28	......	.52	....	15C	300	B-6	S.C. Bay.	2C-2R	1¹⁄₁₆	1¾
403	1692	28	......	.61	....	15C	1000	S-8	D.C. Bay.	2C-2R	1⅛	2
404	307NR	28	......	.67	....	....	300	S-8	S.C. Bay.	C-2V	1⅛	2
405	307R	28	......	.67	....	....	300	S-8	S.C. Bay.	C-2V	......	2
406	**307SB**	**28**	......	**.67**	....	....	**300**	**S-8**	**S.C. Bay.**	**C-2V**	**1⅛**	**2**
407	308NR	28	......	.67	....	....	300	S-8	D.C. Bay.	C-2V	1⅛	2
408	308R	28	......	.67	....	....	300	S-8	D.C. Bay.	C-2V	......	2
409	**307**	**28**	......	**.67**	....	**21C**	**300**	**S-8**	**S.C. Bay.**	**C-2V**	**1⅛**	**2**
410	**307IF**	**28**	......	**.67**	....	**21C**	**300**	**S-8**	**S.C. Bay.**	**C-2V**	**1⅛**	**2**
411	308	28	......	.67	....	21C	300	S-8	D.C. Bay.	C-2V	1⅛	2
412	308IF	28	......	.67	....	21C	300	S-8	D.C. Bay.	C.2V	1⅛	2
413	1666	28	......	.68 .68	....	21C 21C	300 300	S-8	D.C. Bay.	CC-6 CC-6	1¼	2

① Approximate

"Rated" volts is voltage of the circuit in which lamps are designed to be operated; "Design" volts the voltage at which the lamp is designed for average ampere, candlepower and rated laboratory life characteristics. They are the same unless shown separately in the specifications data.

ELECTRICAL SPECIFICATIONS

PHYSICAL SPECIFICATIONS

Line No.	Lamp Number	Rated Volts	Design Volts	Design Amps	Bat-teries	C.P. or Watts	Rated avg. lab. Life (hrs.)	Bulb	Base	Fila-ment	Light Center Length (Inch.)	Max. Over-all Length (Inch.)
414	1666IF	28	......	.68 .68	....	21C 21C	300 300	S-8	D.C. Bay.	CC-6 CC-6	1¼	2
415	309NR	28	......	.90	....	....	300	S-11	S.C. Bay.	C-2V	1¼	2⅜
416	**309SB**	**28**	......	**.90**	....	....	**300**	**S-11**	**S.C. Bay.**	**C-2V**	**1¼**	**2⅜**
417	**309**	**28**	......	**.90**	....	**32C**	**300**	**S-11**	**S.C. Bay.**	**C-2V**	**1¼**	**2⅜**
418	309IF	28	......	.90	....	32C	300	S-11	S.C. Bay.	C-2V	1¼	2⅜
419	310	28	......	.90	....	32C	300	S-11	D.C. Bay.	C-2V	1¼	2⅜
420	315	28	......	.90	....	32C	300	S-8	S.C. Bay.	C-2V	1⅛	2
421	1662	28	......	.93 .34	....	32C 6C	400 1000	S-8	D.C. Index.④	CC-6 C-2V	1¼	2
422	1638	28	......	1.02	....	32C	500	S-8	D.C. Bay.	2C-6	1¼	2
423	311NR	28	......	1.29	....	....	300	S-11	S.C. Bay.	C-2V	1¼	2⅜
424	311R	28	......	1.29	....	....	300	S-11	S.C. Bay.	C-2V	......	2⅜
425	311SB	28	......	1.29	....	....	300	S-11	S.C. Bay.	C-2V	1¼	2⅜
426	312NR	28	......	1.29	....	....	300	S-11	D.C. Bay.	C-2V	1¼	2⅜
427	312R	28	......	1.29	....	....	300	S-11	D.C. Bay.	C-2V	......	2⅜
428	311	28	......	1.29	....	50C	300	S-11	S.C. Bay.	C-2V	1¼	2⅜
429	312	28	......	1.29	....	50C	300	S-11	D.C. Bay.	C-2V	1¼	2⅜
430	312 IF	28	......	1.29	....	50C	300	S-11	D.C. Bay.	C-2V	1¼	2⅜
431	1049	28	......	1.40	....	37C①	50	RP-11	S.C. Bay.	2C-2V	1¼	2¼
432	1048X	28	......	2.34 .52	....	85C 10C①	125 300	RP-11	D.C. Index.	2CC-6 C-2V	1¼	2¼
OVER 28 VOLTS												
433	1785	30	......	.06-.085	....	....	Long	T-2	Wire Term.	C-21	......	1.25
434	1796	30	......	.17	....	....	250	T-3	Min. Sc.	C-2V	13⁄16	1¼
435	1223	32	......	.16	....	3C①	200	G-6	S.C. Bay.	C-2F	11⁄16	17⁄16
436	**1224**	**32**	......	**.16**	....	**3C①**	**200**	**G-6**	**D.C. Bay.**	**C-2F**	**11⁄16**	**17⁄16**
437	**1224K**	**32**	......	**.16**	....	**3C①**	**200**	**G-6**	**Cand. Sc.**	**C-2F**	**⅞**	**1⅜**
438	1842	32	......	.17	....	4.7C	250	T-4	Cand. Sc.	C-2V	15⁄16	1½
439	1226	32	......	.20	....	6C	150	G-8	D.C. Bay.	C-2V	⅞	1¾
440	1228	32	......	.45	....	15C	150	S-8	D.C. Bay.	C-2V	1⅛	2
441	1238	32	......	3.5	....	225C①	50	G-16½	D.C. Bay.	CC-6	1¼	3
442	1240	32	......	3.5	....	225C	50	G-16½	D.C. Pref. (A)	CC-6	1⅛	3
443	1822	36	......	.10	....	2.5C	1000	T-3¼	Min. Bay.	C-2V	⅝	1 3⁄16
444	1828	37.5	......	.05	....	.65C	Long	T-3¼	Min. Bay.	C-2F	⅝	1 3⁄16
445	1832	37.5	......	.05	....	.65C	Long	T-3¼	Min. Sc.	C-2F	13⁄16	1 3⁄16
446	1786	48	......	.032-.038	....	....	Long	T-2	Wire Term.	C-5	......	1.25
447	1776	48	......	.09-.11	....	....	Long	T-2	Wire Term.	C-5	......	1.25
448	1799	55	......	.045-.06	....	....	Long	T-2	Wire Term.	C-5	......	1.25
449	1835	55	......	.05	....	....	Long	T-3¼	Min. Bay.	C-5	⅝	1 3⁄16
450	1844	55	......	.10	....	3.6C	1000	T-4	Cand. Sc.	C-2V	1	1½
451	1787	60	......	.045-.055	....	....	Long	T-2	Wire Term.	C-5	......	1.25
452	1426	120	......	....	....	7w	500②	C-7½	Cand. Sc.	C-7A	......	2⅛
453	1426B	120	......	....	....	7w	500②	C-7½	Cand. Sc.	C-7A	......	2⅛
454	1426G	120	......	....	....	7w	500②	C-7½	Cand. Sc.	C-7A	......	2⅛
455	1426R	120	......	....	....	7w	500②	C-7½	Cand. Sc.	C-7A	......	2⅛
456	1426Y	120	......	....	....	7w	500②	C-7½	Cand. Sc.	C-7A	......	2⅛

① Approximate ② Average Useful Life

④ Connections of major and minor filament to base are reversed from those for automotive lamps with D. C. Index base.

"Rated" volts is voltage of the circuit in which lamps are designed to be operated; "Design" volts the voltage at which the lamp is designed for average ampere, candlepower and rated laboratory life characteristics. They are the same unless shown separately in the specifications data.

SEALED BEAM LAMPS

A sealed beam type lamp consists of a light source contained in an enclosure made by hermetically sealing an accurately pressed reflector and lens to provide an integral lighting unit. Glass is of a borosilicate, heat-resistant type and the reflector portion is usually of parabolic contour with an aluminized reflecting inner surface. A wide variety of beam patterns and intensities can be provided by proper choices of light source and lens configuration. At present, Sealed Beam lamps are available in diameters of 4½″, 5¾″, 7″ and 8″ known as PAR-36, PAR-46, PAR-56 and PAR-64 respectively. Certain types are available in a permanent amber or red lens finish. Other, less permanent color coatings may be made available for special applications.

6 FEATURES OF G-E HEADLAMPS

G-E Aim-right Gizmoes . . . are three glass pads molded in the lenses of G-E Headlamps to enable quick, accurate aiming with any aiming machine. Aim-right Gizmoes are precisely located with respect to the beam and are not vulnerable to chipping, cracking or breaking.

G-E Shield . . . covers the lower beam filament only, cutting off the "uncontrolled upward light" which reflects back in motorists' eyes during rain, snow and fog.

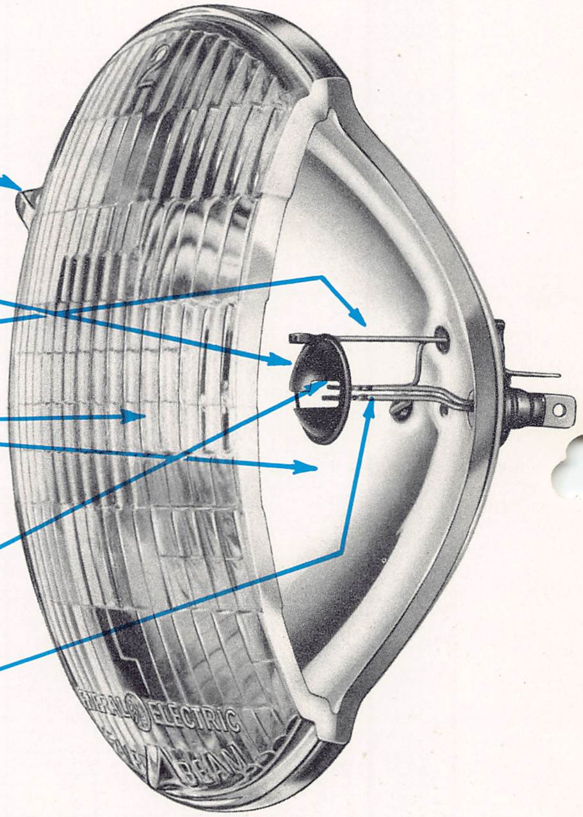
G-E Shields are clamped to separate rods to protect the filament during shock and vibration.

The Redesigned-Lens-Reflector . . . combination directs light farther down the road. Passing is easier.

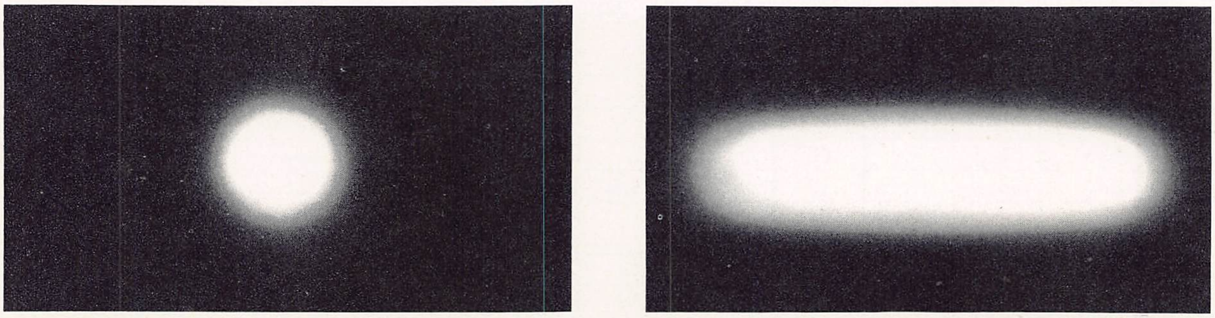
Only General Electric . . . makes all of the individual parts that go into headlamps — and even the machines are designed by G-E engineers; assuring maximum quality control.

More Powerful . . . The lower beam puts twice as much light on the right side of the road 300 feet ahead.

Pre-Formed Lead-In Wires . . . There is no "spring action" to pull them out of focus.



EXAMPLES OF BEAM SPREAD



Picture on left shows the pattern from one 30-watt automotive spotlamp producing 75,000 beam candlepower with spread of 5° x 5°. The picture on the right shows the pattern from one 35-watt tractor floodlamp producing 1,000 beam candlepower with spread of 80° x 20°.

G-E MINIATURE LAMPS STANDARD LINE

TABLE OF SERVICES

AUTOMOTIVE

HEADLAMPS

Lamp No.	Line No.	Lamp No.	Line No.
4001	73	4005	80
4001A	74	5040A	11
4002	76	5042	12
4002A	77	5402	82
4003	79	6006	13
4004	85	6012	83
		6013	84

SIGNAL

Lamp No.	Line No.	Lamp No.	Line No.
4002R	78	4414A	50
4013R	35	4414R	51
4014	31	4416R	55
4014A	32	4416R	55
4014R	33	4418R	81
4018R	10	4475R	58
4413R	65	4501	104
4414	49	4510R	37
		4575R	23

FOGLAMPS

Lamp No.	Line No.	Lamp No.	Line No.
4012	26	4412	62
4012A	27	4412A	63
4015	28	4415	66
4015A	29	4415A	67

SPOTLAMPS

Lamp No.	Line No.	Lamp No.	Line No.
4405	52	4516	20
4416	53	4516C	21
4416C	54	4516R	22
4435	57	4535	39
4515	42		

OTHER

Lamp No.	Line No.	Lamp No.	Line No.
4010	15	4510	36
4411	61	4511	19

AIRCRAFT

LANDING

Lamp No.	Line No.	Lamp No.	Line No.
4509	90	4557	128
4522	93	4559	124
4537	92	4561	94
4541	119	4580	121
4552	117	4581	122
4553	118	4591	109
4555	129	4615	127
4556	126	4616	125

TAXIING

Lamp No.	Line No.	Lamp No.	Line No.
4550	115	4557	128
4551	116	4570	112
4554	120	4573	114

OTHER

Lamp No.	Line No.	
4505	107	Passing
4582	123	Helicopter Flood
4593	108	In-Air re-fueling
4594	110	Marker
4613	111	Marker
4614	8	Navigation

C.I.M. Lamps

Lamp No.	Line No.	Lamp No.	Line No.
4078	40	4577	98
4080	41	4578	96
4478	86	4880	97
4480	87		

BICYCLE & MOTORCYCLE LAMPS

Lamp No.	Line No.	Lamp No.	Line No.
4020	38	4420	56
		4512	1

HAND LANTERN LAMPS

Lamp No.	Line No.	Lamp No.	Line No.
4546	2	4547	4
4546X	3	4576	46
		4618	5

MARINE LAMPS

Lamp No.	Line No.	Lamp No.	Line No.
4509	90	4545	47
4519	91	4586	45
4544	7	4588	44

MILITARY (Automotive)

Lamp No.	Line No.	Lamp No.	Line No.
4031	43	4572	103
4431	75	4800	95
4502	106	4801	99
4503	88	4811	102
4531	48	4860	100
		4863	101

TRACTOR LAMPS

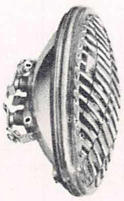
Lamp No.	Line No.	Lamp No.	Line No.
4009	14	4419	68
4013	34	4422	69
4019	16	4424	70
4022	17	4601	24
4024	18	4603	71
4406	59	4605	25
4409	60	4610	72
4413	64	4617	30

SPECIAL SERVICE LAMPS

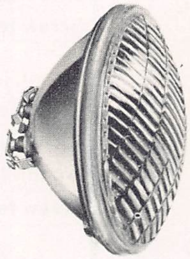
Lamp No.	Line No.	
4524	9	Spotlamp
4543	89	Spotlamp
4571	113	Floodlamp
4606	6	Emergency lighting

SEALED BEAM

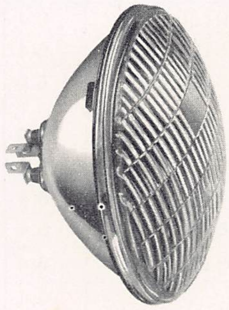
Typical sealed beam lamps. Lens configuration and color are varied for specific applications or predetermined beam patterns. The basic dimensions remain the same for all services.



PAR-36
Max. diameter 4.46″



PAR-46
5.70″



PAR-56
7.031″

ELECTRICAL SPECIFICATIONS

PHYSICAL SPECIFICATIONS

Line No.	Lamp No.	Circuit or Rated volts	Design volts	Design amps	Watts	Rated avg. lab. Life (hrs.)	Base	Bulb	Filament	Max. Overall lgth. (in.)	Initial max. C.P. (approx.)	Approx. Spread to 10% max. C.P. (degrees)	
												Horiz.	Vert.
1	**4512**	**4.7**	......	**.5**	......	**100**	**Screw term.**	**PAR-36**	**C-2R**	**2¾**	**150**	**Trapezoidal**	
2	**4546**	**4.7**	......	**.5**	......	**100**	**Screw term.**	**PAR-36**	**C-2R**	**2¾**	**6,300**	**3**	**3**
3	4546X	4.7	......	.5	......	100	Screw term.	PAR-36	C-2R	2¾	6,300	3	3
4	4547	4.75	......	1.25	......	100	Screw term.	PAR-36	C-2R	2¾	22,000	3	3
5	4618	4.8	......	1.0	......	100	Screw term.	PAR-36	C-2R	2¾	13,000	3	3
6	4606	5.7	......	3.7	......	150	Screw term.	PAR-46	C-6	3¾	800	80	20
7	4544	6	......	......	100	100	Screw term.	PAR-56	C-6	4½	280,000	9	5
8	4614	6	......	......	100	300	Screw term.	PAR-36	C-6	2¾	85,000	11	6
9	4524	6	......	4.75	......	400	Screw term.	PAR-46	C-6	3¾	80,000	8	4
10	4018R	6	6.1 6.2	......	50 40	300 500	3 cont. lugs	PAR-56	C-6 C-6	5	....	......	......
11	5040A	6	6.1 6.2	......	50 40	300 500	3 cont. lugs	PAR-56	C-6 C-6	5	....	......	......
12	5042	6	6.1 6.2	......	50 40	300 500	3 cont. lugs	PAR-56	C-6 C-6	5	....	......	......
13	**6006**	**6**	**6.1 6.2**	......	**50 40**	**300 500**	**3 cont. lugs**	**PAR-56**	**C-6 C-6**	**5**	....	......	......
14	4009	6	6.2	......	30	300	Screw term.	PAR-36	C-6	2¾	....	80	30
15	**4010**	**6**	**6.2**	......	**30**	**300**	**Screw term.**	**PAR-46**	**C-6**	**3¾**	**30,000**	**15**	**4**
16	**4019**	**6**	**6.2**	......	**30**	**300@7V**	**Screw term.**	**PAR-46**	**C-6**	**3¾**	....	**Trapezoidal**	
17	4022	6	6.2	......	30	300@7V	Screw term.	PAR-36	C-6	2¾	300	110° cone	
18	4024	6	6.2	......	30	300@7V	Screw term.	PAR-36	C-6	2¾	300	110° cone	
19	**4511**	**6**	**6.2**	......	**30**	**300@7V**	**Screw term.**	**PAR-36**	**C-6**	**2¾**	....	**Trapezoidal**	
20	**4516**	**6**	**6.2**	......	**30**	**300**	**Screw term.**	**PAR-36**	**C-6**	**2¾**	**40,000**	**9**	**4**
21	4516C	6	6.2	......	30	300	Screw term.	PAR-36	C-6	2¾	40,000	9	4
22	**4516R**	**6**	**6.2**	......	**30**	**300**	**Screw term.**	**PAR-36**	**C-6**	**2¾**	**4,500**	**9**	**4**
23	4575R	6	6.2	......	30	300	Screw term.	PAR-46	C-6	3¾	10,000	8	4
24	**4601**	**6**	**6.2**	......	**30**	**300@7V**	**Screw term.**	**PAR-36**	**C-6**	**2¾**	....	**Trapezoidal**	
25	4605	6	6.2	......	30	300@7V	Screw term.	PAR-46	C-6	3¾	....	Trapezoidal	
26	**4012**	**6**	**6.2**	......	**35**	**300**	**Screw term.**	**PAR-46**	**C-6**	**3¾**	**11,000**	**40**	**5**
27	**4012A**	**6**	**6.2**	......	**35**	**300**	**Screw term.**	**PAR-46**	**C-6**	**3¾**	**8,800**	**40**	**5**
28	**4015**	**6**	**6.2**	......	**35**	**300**	**Screw term.**	**PAR-36**	**C-6**	**2¾**	**8,500**	**40**	**5**
29	**4015A**	**6**	**6.2**	......	**35**	**300**	**Screw term.**	**PAR-36**	**C-6**	**2¾**	**7,000**	**40**	**5**
30	**4617**	**6**	**6.2**	......	**30**	**300**	**Screw term.**	**PAR-36**	**C-6**	**2¾**	**600**	**80**	**30**
31	4014	6	6.4	......	18	200	Screw term.	PAR-36	C-6	2¾	1,400	50	25
32	4014A	6	6,4	......	18	200	Screw term.	PAR-36	C-6	2¾	450	50	25
33	4014R	6	6.4	......	18	200	Screw term.	PAR-36	C-6	2¾	275	50	25
34	**4013**	**6**	**6.4**	......	**25**	**300**	**Screw term.**	**PAR-46**	**C-6**	**3¾**	**880**	**80**	**20**
35	4013R	6	6.4	......	25	300	Screw term.	PAR-46	C-6	3¾	150	80	20
36	**4510**	**6**	**6.4**	......	**25**	**300**	**Screw term.**	**PAR-36**	**C-6**	**2¾**	**800**	**80**	**20**
37	**4510R**	**6**	**6.4**	......	**25**	**300**	**Screw term.**	**PAR-36**	**C-6**	**2¾**	**100**	**80**	**20**
38	4020	6	6.4	......	30 30	300 300	3 cont. lugs	PAR-46	C-6 C-6	4	....	......	......
39	**4535**	**6**	**6.4**	......	**30**	**100**	**Screw term.**	**PAR-46**	**C-6**	**3¾**	**95,000**	**5½**	**4**
40	**4078**	**6**	**6.4**	......	**50**	**500**	**2 cont. lugs**	**PAR-46**	**C-6**	**4**	**1,600**	**55**	**25**
41	**4080**	**6**	**6.4**	......	**50**	**500**	**2 cont. lugs**	**PAR-46**	**C-6**	**4**	**6,000**	**40**	**7**
42	**4515**	**6**	**6.4**	......	**30**	**100**	**Screw term.**	**PAR-36**	**C-6**	**2¾**	**60,000**	**5½**	**4½**
43	4031	6	6.4 6.4	......	45 35	300 500	3 cont. lugs	PAR-46	C-6 C-6	4	....	......	......
44	4588	6.5	......	......	50	100	Mogul end prong	PAR-36	C-6	3⅜	70,000	7	5

"Rated" volts is voltage of the circuit in which lamps are designed to be operated; "Design" volts the voltage at which the lamp is designed for average ampere, candlepower and rated laboratory life characteristics. They are the same unless shown separately in the specifications data.

ELECTRICAL SPECIFICATIONS							PHYSICAL SPECIFICATIONS						
Line No.	Lamp No.	Circuit or Rated volts	Design volts	Design amps	Watts	Rated avg. lab. Life (Hrs.)	Base	Bulb	Fila-ment	Max. Over-all lgth. (in.)	Initial max. C.P. (approx.)	Approx. Spread to 10% max. C.P. (degrees)	
												Horiz.	Vert.
45	4586	6.5	......	......	100	100	Mogul end prong	PAR-36	C-6	3⅜	95,000	8	6
46	4576	7.1	......	2.0	......	50	Screw term.	PAR-46	C-6	3¾	60,000	5	3
47	4545	12	......	......	100	100	Screw term.	PAR-56	C-6	4½	240,000	9	5
48	4531	12	12.5	......	40	400	Screw term.	PAR-46	C-6	3¾	27,000	20	5
49	4414	12	12.8	......	18	300	Screw term.	PAR-36	C-6	2¾	1,400	50	25
50	4414A	12	12.8	......	18	300	Screw term.	PAR-36	C-6	2¾	450	50	25
51	4414R	12	12.8	......	18	300	Screw term.	PAR-36	C-6	2¾	275	50	25
52	**4405**	**12**	**12.8**	......	**30**	**100**	**Screw term.**	**PAR-36**	**C-6**	**2¾**	**50,000**	**6**	**5**
53	**4416**	**12**	**12.8**	......	**30**	**300**	**Screw term.**	**PAR-36**	**C-6**	**2¾**	**35,000**	**11**	**4½**
54	4416C	12	12.8	......	30	300	Screw term.	PAR-36	C-6	2¾	35,000	11	4½
55	**4416R**	**12**	**12.8**	......	**30**	**300**	**Screw term.**	**PAR-36**	**C-6**	**2¾**	**4,000**	**11**	**4½**
56	4420	12	12.8	......	30 30	300 300	3 cont. lugs	PAR-46	C-6 C-6	4	....	......	......
57	**4435**	**12**	**12.8**	......	**30**	**100***	**Screw term.**	**PAR-46**	**C-6**	**3¾**	**75,000**	**5**	**5**
58	4475R	12	12.8	......	30	300	Screw term.	PAR-46	C-6	3¾	7,000	10	4
59	4406	12	12.8	......	35	300*	Screw term.	PAR-36	C-6	2¾	600	80	30
60	4409	12	12.8	......	35	300*	Screw term.	PAR-36	C-6	2¾	600	80	30
61	**4411**	**12**	**12.8**	......	**35**	**300**	**Screw term.**	**PAR-36**	**C-6**	**2¾**	....	**Trapezoidal**	
62	**4412**	**12**	**12.8**	......	**35**	**300**	**Screw term.**	**PAR-46**	**C-6**	**3¾**	**11,000**	**40**	**5**
63	**4412A**	**12**	**12.8**	......	**35**	**300**	**Screw term.**	**PAR-46**	**C-6**	**3¾**	**8,800**	**40**	**5**
64	**4413**	**12**	**12.8**	......	**35**	**300***	**Screw term.**	**PAR-46**	**C-6**	**3¾**	**1,000**	**80**	**20**
65	**4413R**	**12**	**12.8**	......	**35**	**300***	**Screw term.**	**PAR-46**	**C-6**	**3¾**	**150**	**80**	**20**
66	**4415**	**12**	**12.8**	......	**35**	**300**	**Screw term.**	**PAR-36**	**C-6**	**2¾**	**9,000**	**40**	**5**
67	**4415A**	**12**	**12.8**	......	**35**	**300**	**Screw term.**	**PAR-36**	**C-6**	**2¾**	**7,000**	**40**	**5**
68	**4419**	**12**	**12.8**	......	**35**	**300***	**Screw term.**	**PAR-46**	**C-6**	**3¾**	....	**Trapezoidal**	
69	4422	12	12.8	......	35	300*	Screw term.	PAR-36	C-6	2¾	325	110° cone	
70	4424	12	12.8	......	35	300*	Screw term.	PAR-36	C-6	2¾	325	110° cone	
71	**4603**	**12**	**12.8**	......	**35**	**300***	**Screw term.**	**PAR-36**	**C-6**	**2¾**	....	**Trapezoidal**	
72	4610	12	12.8	......	35	300*	Screw term.	PAR-46	C-6	3¾	....	Trapezoidal	
73	**4001**	**12**	**12.8**	......	**37.5**	**200***	**2 cont. lugs**	**PAR-46**	**C-6**	**4**	....	......	......
74	4001A	12	12.8	......	37.5	200*	2 cont. lugs	PAR-46	C-6	4	....	......	......
75	4431	12	12.8	......	45 35	160* 275*	3 cont. lugs	PAR-46	C-6 C-6	4	....	......	......
76	**4002**	**12**	**12.8** **12.8**	......	**50** **37.5**	**320*** **200***	**3 cont. lugs**	**PAR-46**	**C-6** **C-6**	**4**	....	3 LUGS	......
77	4002A	12	12.8 12.8	......	50 37.5	320* 200*	3 cont. lugs	PAR-46	C-6 C-6	4	....	......	......
78	4002R	12	12.8 12.8	......	50 37.5	320* 200*	3 cont. lugs	PAR-46	C-6 C-6	4	....	......	......
79	4003	12	12.8 12.8	......	50 37.5	320* 200*	3 cont. lugs	PAR-46	C-6 C-6	4	....	......	......
80	**4005**	**12**	**12.8** **12.8**	......	**50** **37.5**	**400*** **240***	**3 cont. lugs**	**PAR-46**	**C-6** **C-6**	**4**	....	......	......
81	4418R	12	12.8 12.8	......	50 40	240* 400*	3 cont. lugs	PAR-56	C-6 C-6	5	....	......	......
82	5402	12	12.8 12.8	......	50 40	200 320	3 cont. lugs	PAR-56	C-6 C-6	5	....	......	......
83	**6012**	**12**	**12.8** **12.8**	......	**50** **40**	**200** **320**	**3 cont. lugs**	**PAR-56**	**C-6** **C-6**	**5**	....	......	......
84	**6013**	**12**	**12.8** **12.8**	......	**50** **40**	**240*** **400***	**3 cont. lugs**	**PAR-56**	**C-6** **C-6**	**5**	....	......	......
85	4004	12	12.8	......	60	200*	2 cont. lugs	PAR-46	C-6	4	....	......	......

*At 14 volts. †At 13½ Volts.

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ELECTRICAL SPECIFICATIONS							PHYSICAL SPECIFICATIONS						
Line No.	Lamp No.	Circuit or Rated volts	Design volts	Design amps	Watts	Rated avg. Lab. Life (Hrs.)	Base	Bulb	Filament	Max. Over-all lgth. (in.)	Initial max. C.P. (approx.)	Approx. Spread to 10% max. C.P. (degrees)	
												Horiz.	Vert.
86	**4478**	**12**	**13.0**	......	**60**	**800***	**2 cont. lugs**	**PAR-46**	**2C-6**	**4**	**1,600**	**55**	**25**
87	**4480**	**12**	**13.0**	......	**60**	**800***	**2 cont. lugs**	**PAR-46**	**2C-6**	**4**	**6,000**	**40**	**7**
88	4503	12	14	......	40	400	Screw term.	PAR-36	C-6	2¾	11,000	40	6
89	4543	12.5	......	......	100	50	Screw term.	PAR-56	C-6	4½	250,000	9	5
90	**4509**	**13**	......	......	**100**	**25**	**Screw term.**	**PAR-36**	**C-6**	**2¾**	**110,000**	**11**	**6**
91	4519	13	......	......	100	25	Screw term.	PAR-36	C-6	2¾	30,000	40	7
92	**4537**	**13**	......	......	**100**	**25**	**Screw term.**	**PAR-46**	**C-6**	**3⅛**	**200,000**	**11**	**6**
93	4522	13	......	......	250	25	Screw term.	PAR-46	C-2	3⅛	290,000	12	10
94	4561	13	......	......	250	25	Screw term.	PAR-64	C-2	3¾	450,000	9	8
95	4800	24	28	......	50 40	400 400	3 cont. lugs	PAR-56	CC-6 CC-6	5	23,000 12,000	30 30	6 6
96	**4578**	**24**	**28**	......	**60**	**800**	**2 cont. lugs**	**PAR-46**	**2C-6**	**4**	**1,600**	**55**	**25**
97	**4880**	**24**	**28**	......	**60**	**800**	**2 cont. lugs**	**PAR-46**	**2C-6**	**4**	**6,000**	**40**	**7**
98	4577	24	28	......	75	500	2 cont. lugs	PAR-46	CC-8	4	100,000	7	7
99	4801	24	28	......	80 60	400 400	3 cont. lugs	PAR-56	CC-6 CC-6	5	25,000 13,000	30 30	6 6
100	4860	24	28	......	80 60	400 400	Waterproof	PAR-56	CC-6 CC-6	5	25,000 13,000	30 30	6 6
101	4863	24	28	......	80 60	400 400	Waterproof	PAR-56	CC-6 CC-6	5	....	......	......
102	4811	24	28	......	110 55	400 400	3 cont. lugs	PAR-36	CC-6 CC-6	3	11,500 7,000	40 35	12 7
103	4572	24	28	......	150	300	Screw term.	PAR-46	CC-6	3¾	4,500	55	55
104	4501	26	......	5.3	......	50	Screw term.	PAR-36	4CC-8	2¾	60,000	11	12
105	4530	26	......	5.3	......	50	Screw term.	PAR-46	4CC-8	3¾	130,000	10	10
106	**4502**	**28**	......	......	**50**	**400**	**Screw term.**	**PAR-36**	**CC-6**	**2¾**	**10,000**	**40**	**7**
107	4505	28	......	......	50	400	Screw term.	PAR-36	CC-6	2¾	40,000	11	6
108	4593	28	......	......	50	400	Screw term.	PAR-36	CC-6	2¾	1,500	80	30
109	4591	28	......	......	100	25	Screw term.	PAR-36	CC-6	2¾	90,000	12	6
110	**4594**	**28**	......	......	**100**	**300**	**Screw term.**	**PAR-36**	**CC-6**	**2¾**	**75,000**	**13**	**7**
111	4613	28	......	......	100	300	Screw term.	PAR-36	CC-6	2¾	75,000	13	7
112	**4570**	**28**	......	......	**150**	**300**	**Screw term.**	**PAR-46**	**CC-6**	**3¾**	**32,000**	**50**	**9**
113	4571	28	......	......	150	300	Screw term.	PAR-46	CC-6	3¾	7,000	80	20
114	4573	28	......	......	150	300	Screw term.	PAR-46	CC-6	3⅛	32,000	50	9
115	4550	28	......	......	250	25	Screw term.	PAR-56	CC-6	4½	75,000	33	8
116	4551	28	......	......	250	25	Screw term.	PAR-46	CC-6	3¾	75,000	50	10
117	4552	28	......	......	250	25	Screw term.	PAR-64	CC-8	3¾	500,000	8	7
118	4553	28	......	......	250	25	Screw term.	PAR-46	CC-8	3⅛	250,000	11	12
119	4541	28	......	......	450	25	Screw term.	PAR-56	C-13	4½	450,000	15	11
120	4554	28	......	......	450	25	Screw term.	PAR-46	CC-8	3⅛	90,000	50	16
121	4580	28	......	......	450	10	Screw term.	PAR-46	CC-8	3¾	400,000	13	14
122	4581	28	......	......	450	10	Screw term.	PAR-46	CC-8	3⅛	400,000	13	14
123	4582	28	......	......	450	10	Screw term.	PAR-46	CC-8	3¾	20,000	50	60
124	**4559**	**28**	......	......	**600**	**25**	**Screw term.**	**PAR-64**	**CC-8**	**3¾**	**600,000**	**11**	**12**
125	4616	28	......	......	600	25	Screw term.	PAR-64	CC-8	3½	600,000	11	12
126	4556	28	......	......	1000	25	Screw term.	PAR-64	CC-8	3¾	800,000	12	13
127	4615	28	......	......	1000	25	Screw term.	PAR-64	CC-8	3½	800,000	12	13
128	4557	28	......	......	1000 400	25 100	3 screw term.	PAR-64	......	3¾	540,000 100,000	11 25	15 11
129	4555	115	......	......	1000	25	Screw term.	PAR-64	CC-13	3¾	600,000	20	11

*At 14 volts. †At 13½ Volts.

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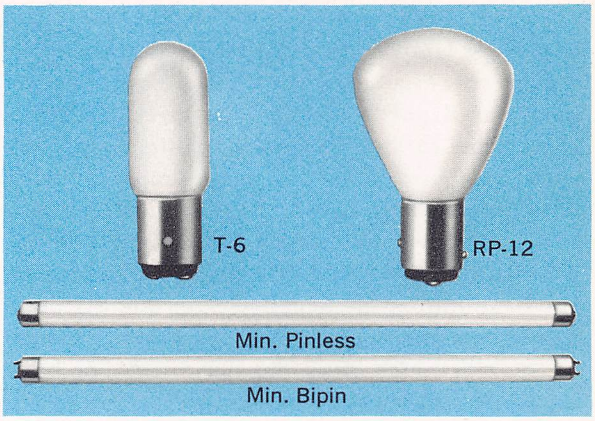
AIRCRAFT LAMPS
(ELECTRIC DISCHARGE)



General Electric has a complete line of miniature Blacklight and Fluorescent lamps for cockpit and cabin use.

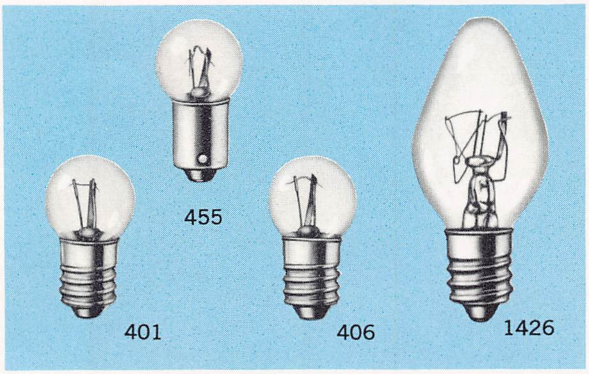
Lamps in the T-6 and RP-12 bulbs are blacklight lamps for instrument lighting, designed primarily for direct current operation. They are provided with an indexing base for proper polarization in the circuit.

Lamps with T-5 bulbs are Rapid-Start fluorescent lamps having specially designed, rugged cathodes for aircraft service.

ELECTRICAL and PHYSICAL SPECIFICATIONS

Lamp No.	Nom. watts	Nom. volts	Bulb	Base	Length (Inches)	Circuit	Color
MF2T6/BL	2	....	T-6	D.C. Index.	2⅜	24–28V DC	Black light
MF3RP12/BL	3	....	RP-12	D.C. Index.	2⁹⁄₁₆	12–16V DC	Black light
MF5000	4	....	RP-12	D.C. Index.	2⁹⁄₁₆	24–28V DC	Black light
5004CW	4	28	T-5	Min. Pinless	6	Rapid start	Cool white
5004R	4	28	T-5	Min. Pinless	6	Rapid start	Red
5004WW	4	28	T-5	Min. Pinless	6	Rapid start	Warm white
5104WW	4	28	T-5	Min. Bipin	6	Rapid start	Warm white
5008CW	8	53	T-5	Min. Pinless	12	Rapid start	Cool white
5008R	8	53	T-5	Min. Pinless	12	Rapid start	Red
5008WW	8	53	T-5	Min. Pinless	12	Rapid start	Warm white
5108WW	8	53	T-5	Min. Bipin	12	Rapid start	Warm white
5013CW	13	90	T-5	Min. Pinless	21	Rapid start	Cool white
5013R	13	90	T-5	Min. Pinless	21	Rapid start	Red
5013WW	13	90	T-5	Min. Pinless	21	Rapid start	Warm white
5113WW	13	90	T-5	Min. Bipin	21	Rapid start	Warm white

FLASHER LAMPS



General Electric Flasher-Filament lamps have a bi-metal strip added to the filament mount to provide the flashing. Heat from the filament causes this strip to bend away from the lead wire, breaking the circuit. As the bi-metal strip cools it returns to its original position against the lead wire and the lamp lights.

Flasher Lamps are used in a variety of services as shown in the table below.

* Colored lamps are outside transparent coated blue, green, red or yellow.

FLASHER LAMPS ELECTRICAL and PHYSICAL SPECIFICATIONS

Lamp No.	Circuit or rated volts	Design volts	Design amps	C.P. or watts	Bat-teries	Base	Bulb	Fila-ment	Max. over-all lgth.(in.)	Flashes per min.	Average useful life (hrs.)	Service
401	1.25	....	.22	.09C	1D	Min. Scr.	G-4½	S-2	1¹⁄₁₆	......	15	Toy
406	2.6	....	.30	.43C	2D	Min. Scr.	G-4½	C-2R	1¹⁄₁₆	45	50	Toy
407	4.9	....	.30	.70C	4F	Min. Scr.	G-4½	C-2R	1¹⁄₁₆	90	50	Hand lantern
408	4.9	....	.30	.70C	4F	Min. Bay.	G-4½	C-2R	1¹⁄₁₆	......	50	Hand lantern
405	6.5	6.0	.50	1.9C	....	Min. Scr.	G-4½	C-2R	1¹⁄₁₆	45	500	Signal
455	6.5	....	.50	1.9C	....	Min. Bay.	G-4½	C-2R	1¹⁄₁₆	......	500	Indicator
257	12	14.0	.27	....	....	Min. Bay.	G-4½	C-2R	1¹⁄₁₆	......	500	Auto & Toy train
258	14	....	.27	....	....	Min. Scr.	G-4½	C-2R	1¹⁄₁₆	......	500	Toy train
1426	120	....	....	7w	....	Cand. Sc.	C-7½	C-7A	2⅛	......	500	Indicator
1426B*	120	....	....	7w	....	Cand. Sc.	C-7½	C-7A	2⅛	......	500	Indicator
1426G*	120	....	....	7w	....	Cand. Sc.	C-7½	C-7A	2⅛	......	500	Indicator
1426R*	120	....	....	7w	....	Cand. Sc.	C-7½	C-7A	2⅛	......	500	Indicator
1426Y*	120	....	....	7w	....	Cand. Sc.	C-7½	C-7A	2⅛	......	500	Indicator

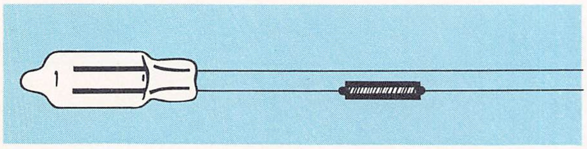
GLOW LAMPS

A glow lamp consists of electrodes sealed in a glass envelope filled with gas. The most commonly used gas is neon which gives a reddish glow when current flows through the lamp. Less commonly used gases are argon and a mixture of helium and argon which produce a blue and a violet glow respectively. The light from a glow lamp is produced by a cushion of luminous gas surrounding the negative electrode. In alternating current usage, the rapid switch in polarity of the electrodes gives the impression of both electrodes glowing continuously.

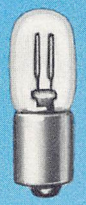
Glow lamps consume low wattage and are mechanically rugged. The latter makes them extremely useful as indicator lamps under severe conditions of vibration and shock. Their light output, however, is low. Like other discharge lamps, they require a current limiting device usually in the form of a series resistor. The life and light output of a glow lamp for a given circuit voltage are controlled by the impedance of the current limiting device. As impedance increases the life is lengthened and the light output is diminished. Proper choice of series impedance allows use at various circuit voltages with life of 25,000 or more hours.

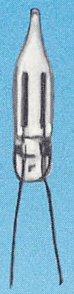
Lamps are supplied in a variety of sizes and electrode shapes as shown in the illustrations. The screw-based lamps have a resistor in the base and are designed for use at a specific circuit voltage. In all other lamps an external resistor must be provided.

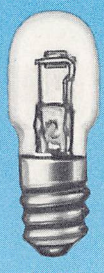
The most popular size of glow lamp is in a T-2 (¼″ dia.) bulb. This lamp is supplied with flexible wire leads. General Electric can supply the T-2 lamps with a resistor built into one of the external leads providing resistance and wiring harness in one unit to fill a customer's specific need. Example shown below.



Glow lamps have unique internal voltage characteristics known as breakdown, maintaining and extinguishing voltage which make them useful as electronic circuit components. They are widely used as voltage regulators and indicators, and in trigger and pulse applications such as memory circuits and relaxation oscillators.


NE-51


NE-2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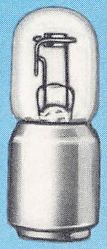
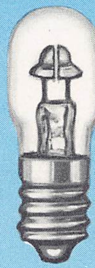
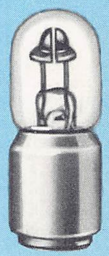
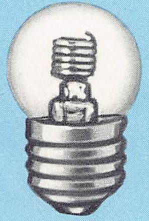
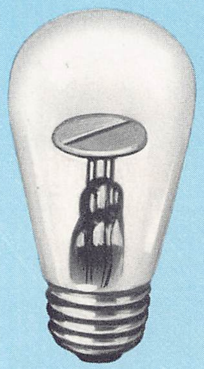
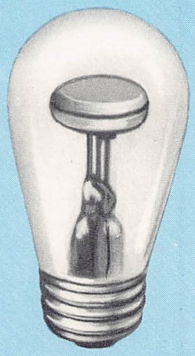

NE-17


AR-3
NE-45
NE-58


AR-4
NE-48


NE-30
NE-56


AR-1
NE-34


NE-40

ELECTRICAL AND PHYSICAL SPECIFICATIONS

ARGON GLOW LAMPS Circuit voltage 105-125, AC or DC

Lamp No.	A.S.A. No.	Nominal watts	Nominal current (ma)	External resistance (ohms)	Max. Initial Starting voltage AC	DC	Average useful life (hrs.)①	Base	Bulb (clear)	Max. over-all lgth. (in.)
AR-1	W1A	2	18.0	NONE	....		1,000	Med. Screw	S-14	3½
AR-3②	J2A	1/4	3.5	NONE	....		150	Cand. Screw	T-4½	1 17/32
AR-4②	J3A	1/4	3.5	15,000	....		150	D.C. Bayonet	T-4½	1½
AR-9	K4A	1/25	0.3	200,000	....		50	1″ wire term.	T-2	1 1/16

① Values are for use on a-c; life on d-c is approx. 60% of a-c values ② Use 135 volts min. for satisfactory d-c oper.

NEON GLOW LAMPS For Indicator Service.—HIGH BRIGHTNESS LAMPS Circuit Voltage 105-125 AC

A1C②	......	1/10	0.8	68,000	95	135	25,000③	1″ wire term.	T-2	½
NE-2H②	C2A	1/4	1.9	30,000	95	135	25,000③	2″ wire term.	T-2	¾
NE-2J②	C9A	1/4	1.9	30,000	95	135	25,000③	S.C. Midg. flg.	T-2	15/16
NE-2P②	K3A	1/4	1.9	30,000	95	135	25,000③	1′ wire term.	T-2	¾
NE-51H②	B2A	1/7	1.2	47,000	95	135 over	25,000③	Min. Bayonet	T-3¼	1 3/16
STANDARD BRIGHTNESS LAMPS Circuit voltage 105-125, AC or DC										
A1B	......	1/25	0.3	200,000	65	90	25,000③	1″ wire term.	T-2	½
NE-2	A1A	1/17	0.5	150,000	65	90	25,000③	1″ wire term.	T-2	1 1/16
NE-2D	C7A	1/15	0.6	100,000	65	90	25,000③	S.C. Midg. flg.	T-2	15/16
NE-2E	A9A	1/15	0.6	100,000	65	90	25,000③	2″ wire term.	T-2	¾
NE-2M	K2A	1/17	0.5	150,000	65	90	25,000③	1″ wire term.	T-2	¾
NE-2V	A2B	1/15	0.6	100,000	65	90	25,000③	2″ wire term.	T-2	¾
NE-17	B5A	1/4	2.0	30,000	65	90	7,500③	D.C. Bayonet	T-4½	1½
NE-30	J5A	1	12.0	NONE	....		10,000③	Med. Screw	S-11	2¼
NE-34	R2A	2	18.0	NONE	65	90	10,000③	Med. Screw	S-14	3½
NE-45	B7A	1/4	2.0	NONE	65	90	7,500③	Cand. Screw	T-4½	1 17/32
NE-48	B9A	1/4	2.0	30,000	65	90	7,500③	D.C. Bayonet	T-4½	1½
NE-51	B1A	1/25	0.3	220,000	65	90	15,000③	Min. Bayonet	T-3¼	1 3/16
NE-56	J9A	1	5.0	NONE	65	90	10,000③	Med. Screw	S-11	2¼
NE-57	F3A	1/4	2.0	NONE	65	90	7,500③	Cand. Screw	T-4½	1 17/32
NE-58	F4A	1/2	2.0	NONE	65	90	7,500③	Cand. Screw	T-4½	1 17/32
NE-79	R1A	1	12.0	7,500	65	90	10,000③	D.C. Bayonet	S-7	2

② Use 150 volts minimum for satisfactory d-c operation

③ Life when operated on AC. For standard brightness lamps, life on DC approx. 60% of these values. For high brightness lamps, where a minimum of 150 volts is recommended for DC operation, life will be somewhat lower than the 60% figure and current and wattage will increase.

NEON GLOW LAMPS for Circuit Component Use

Lamp No.	Initial D-C break-down voltage	Initial D-C main-taining voltage	Design Current (ma.d-c)	Hours operation at design current for indicated avg. voltage change				Lead length (Inches)	Max. over-all length (In.)	Additional specifications (footnotes)
				Breakdown volts		Maintaining volts				
				Change	Hours	Change	Hours			
	TUBULAR BULB (T-2), approx. ¼″ dia., Wire terminals, Parallel Post electrodes									
NE-2AS	60– 90	Avg. >55 @	.3	5-V	2,500	5-V	2,500	2	27/32	① ⑤
NE-2L	65– 85	Avg. >50 @	.3	5-V	6,000	5-V	6,000	2	¾	② ⑥
NE-2S	60– 90	44 – 74 @	.3	5-V	6,000	5-V	6,000	2	1 1/16	① ② ⑥ ⑥
NE-23	60– 90	Avg. >59 @	.3	5-V	6,000	5-V	6,000	1	1 1/16	②
NE-68	60– 90	52 – 65 @	.3	......	.....	5-V	2,000	1	1 1/16	① ② ④ ⑤ ⑥
NE-75	60– 90	Avg. >55 @	.4	⑧	10,000	⑧	10,000	1	¾	⑤
NE-76	68– 76	50 – 60 @	.4	⑧	1,000	5-V	2,000	1 & 1½	1 1/16	① ② ③ ④ ⑤ ⑥
NE-77	Triode	Avg. >85 @	.5	⑧	3,000	.....	......	1	1 1/16	② ⑥ ⑦
NE-80	60– 80	50 – 58 @	.1	5-V	2,000	⑧	2,000	1	1 1/16	① ② ③ ④ ⑤ ⑥
NE-81	64– 80	50 – 60 @	.3	5-V	6,000	5-V	2,000	1	1 1/16	① ② ③ ④ ⑤ ⑥
NE-86	55– 90	Avg. >55 @	1.5	5-V	2,000	5-V	2,000	1	1 1/16	① ②
NE-96	120–150	60 – 80 @	.5	10-V	3,000	10-V	3,000	1	27/32	②
NE-97	110–140	60 – 80 @	.5	10-V	3,000	10-V	3,000	1	27/32	—
TUBULAR BULB (T-2). Telephone slide base, Parallel Post electrodes										
NE-3	55– 90	Avg. >55 @	.3	⑧	15,000	⑧	15,000	......	1 11/16	Base marked NE-3 ⑤
NE-4	60– 90	Avg. >59 @	.3	5-V	6,000	5-V	6,000	......	1 11/16	Base marked NE-4
NE-5	120–150	60 – 80 @	.5	10-V	3,000	10-V	3,000	......	1 11/16	Base marked NE-5
TUBULAR BULB (T-3¼), approx. 13/32″ dia. Miniature bayonet base, Parallel Post electrodes										
NE-51S	55– 90	Avg. >55 @	.2	5-V	1,000	5-V	1,000	......	1 3/16	Base marked NE-51S ⑤
NE-67	55– 90	Avg. >56 @	.2	5-V	1,000	5-V	1,000	......	1 3/16	Base marked NE-67 ⑥
TUBULAR BULB (T-4½), approx. 9/16″ dia., D.C. Bayonet base, Fireman's Hat electrode										
NE-16	67– 87	53 – 65 @	1.5	⑨	1,000	⑨	1,000	......	1½	Base marked NE-16 ②

① Leads tinned. ② Dark effect reduced. ③ Stabilized. ④ Pre-aged.

⑤ Extinguishing voltage in series with .25-megohms or more, 750 volts.

⑥ Bulb Dri-film coated. Leakage resistance greater than 100-megs at 80°F and 75% R.H.25.

⑦ With 140-180 volts d-c on outer electrodes, lamp will trigger with 140 volts d-c trigger to cathode.

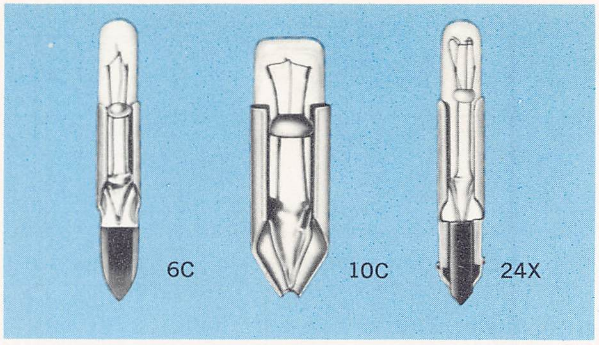
⑧ Voltage to stay within initial (or 100 hour) limits for indicated life.

⑨ Breakdown voltage to remain below 95 volts d-c for indicated life. Maintaining voltage to remain below 70 volts d-c for indicated life. Lamp meets MIL-E-1/283 for the JAN-991 regulator tube.

TELEPHONE LAMPS

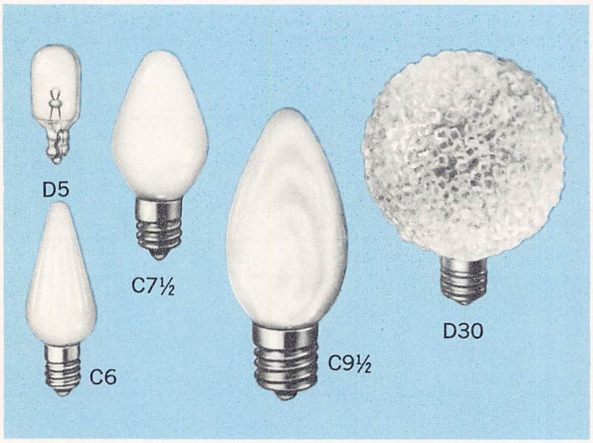
Telephone lamps with T-2 bulb and slide bases are used for a variety of purposes in switchboards. In most instances the lamp functions in conjunction with other pieces of equipment and its design is, therefor, controlled by the circuit characteristics.

Maximum overall length is $1''\frac{11}{16}$ for all but lamp No. 10C which is .915″.



Lamp No.	Rated volts	Design amps	Filament
4A	4	.17 —.21	C-6
6C	6	.035—.045	C-2V
6A	6	.12 —.16	C-2R
6B	6	.27 —.31	C-2V
8A	8	.08 —.10	C-2V
10C	10	.035—.045	C-2V
10A	10	.10 —.12	C-21
10B	10	.23 —.27	C-21
12B	12	.032—.038	C-2V
12A	12	.09 —.11	C-21
12C	12	.15 —.19	C-21
16A	16	.09 —.11	C-21
16B	16	.27 —.31	C-21
18A	18	.035—.045	C-2V
18B	18	.09 —.11	C-21
20C	20	.030—.038	C-21
24A	24	.025—.035	C-2V
24E	24	.032—.038	C-2F
24X	24	.032—.038	C-2F
24B	24	.035—.045	C-2F
24C	24	.06 —.085	C-21
24D	24	.09 —.11	C-21
30A	30	.06 —.085	C-21
30B	30	.09 —.11	C-21
35A	35	.035—.045	C-5
35B	35	.06 —.085	C-5
35C	35	.09 —.11	C-5
40B	40	.035—.045	C-5
44A	44	.06 —.085	C-5
48D	48	.017—.025	C-5
48C	48	.032—.038	C-5
48H	48	.040—.050	C-5
48A	48	.06 —.085	C-5
48B	48	.09 —.11	C-5
55C	55	.045—.06	C-5
55B	55	.09 —.11	C-5
60A	60	.045—.055	C-5

CHRISTMAS LAMPS



General Electric offers a wide variety of Christmas lamps to designers, manufacturers, merchants, home decorators and craftsmen. Artistic color arrangement, tasteful, unique object lighting and exciting indirect effects are just some of the services these Christmas lamps make possible.

Christmas decoration, indoor and outdoor, traditional or modern, futuristic or conservative is enhanced by the newer lamp shapes and colors.

C6 and D5 lamps are for series burning, all others for multiple burning.

D26 and D27 twinkle lamps each contain built-in bimetal flashers that create random twinkling for interesting animation.

Lamp	Bulb	Base	Base dia. (In.)	Watts or amps	Volts	Finish	Service	Colors	Max. over-all lgth. (In.)	Approx. hours life
C6	C-6	Min. Sc.	5/16	.32a	15	Outside Coated	Indoor	A	2 1/16	......
C7½	C-7½	Cand. Sc.	⅜	7w	120	Outside Enameled	In and Out	A	2⅛	500
D5	T-3¼	Wedge	....	.15a	6	Transparent	Indoor	B	1 1/16	1,000
D14	C-9½	Inter.	11/16	10w	120	Outside Enameled	Outdoor	C	3⅛	600
C-9½	C-9½	Inter.	11/16	10w	120	Transparent	Outdoor	D	3⅛	600
D23	C-7½	Cand. Sc.	⅜	7w	120	Outside Coated	In and Out	E	2⅛	......
D26*	C-7½	Cand. Sc.	⅜	7w	120	Transparent	In and Out	B	2⅛	750
D27*	C-9½	Inter.	11/16	7w	120	Transparent	Outdoor	B	3⅛	750
D30	G-14	Cand. Sc.	⅜	7w	120	Translucent	In and Out	G	2¾	1,000
D34	C-7½	Cand. Sc.	⅜	7w	120	Transparent	In and Out	B	2⅛	1,000

*Twinkle lamp

Color code: A — Red, blue, green, white, orange
B — Red, blue, green, rose
C — Red, blue, green, white, orange, yellow
D — Red, yellow, blue, green, rose
E — Red, blue, green, white, orange
F — Red, yellow, blue, green
G — Turquoise, pearl, ruby, topaz, garnet, emerald
H — Red, yellow, blue, green, white, violet

ELECTROLUMINESCENT

The most recent unusual light source developed by General Electric Miniature Lamp Department is the plastic EL lamp. Featuring brightness uniformity, flexibility, thinness, very light weight and versatility, it opens new avenues for decorative lighting, signs, dials and novelty items for areas where ambient light is such that there is adequate contrast between lamp and background.

The plastic EL lamp has ¾″ minimum bend radius, is less than 1/32″ thick and weighs only 3 ounces per square foot. It is easily fabricated into uniform, complex or decorator shapes. It can be supplied with stiff backing at no sacrifice to light output.

Approximate initial current and wattage values per square foot of lamp for 120-volt, 60-cycle power are 65 milliamperes and 3.5 watts.

Although the life of the lamp depends to some extent on such factors as voltage, frequency, temperature and humidity, the USEFUL life in most cases will be dependent on the ambient light where it is used. Thus, in areas of very low ambient light, the brightness may be satisfactory for thousands of hours, while in other areas the initial brightness may be too low to be used at all.

EL lamps can be supplied in virtually any shape that can be inscribed in a rectangle 11¾″ x 14″.

MINIATURE LAMP DEPARTMENT

GENERAL ELECTRIC

GENERAL ELECTRIC MINIATURE LAMP SALES AND ORDER SERVICE OFFICES

	SALES OFFICES (To Obtain Sales and Technical Information)			ORDER SERVICE OFFICES (To Order Lamps and to Obtain Shipping Information. Local Warehouse Stocks maintained at these Points)		
	(Address)	(Zone)	(Telephone)	(Address)	(Zone)	(Telephone)
ALAMO, CALIF.	1448 Casa Vallecita	—	YEllowstone 4-9653	Oakland Serv. Dist., 999–98th Avenue, Oakland 3, Calif.	—	LOckhaven 9-3422
ALBUQUERQUE, N. M.	119 Richmond St., S.E.	—	AMherst 8-0016	Denver Service District, 6501 E. 44th Ave., Denver 16, Colorado	—	DUdley 8-4611
ATLANTA, GA.	Suite 2B, 359 E. Paces Ferry Road, N.E.	5	CEdar 7-0795	680 Murphy Ave., S.W.	10	PLaza 5-5756
BALTIMORE, MD.	P.O. Box 7427	27	CIrcle 2-5700	1401 Parker Road, Arbutus, Md. Mail: P.O. Box 7427, Baltimore 27, Md.	—	CIrcle 2-5700
BOSTON, MASS.	50 Industrial Pl., Newton Upper Falls, Mass.	64	DEcatur 2-6200	50 Industrial Place, Newton Upper Falls, Mass.	64	DEcatur 2-6200
BUFFALO, N. Y.	Rochester Sales Office, 605 Professional Bldg., 35 Chestnut St., Rochester, N. Y.	—	BAker 5-6720	98 Hydraulic St.	10	TL 6-0800
BUTTE, MONT.	103 N. Wyoming	—	4306	Denver Serv. District, 6501 E. 44th Ave., Denver 16, Colorado	—	DUdley 8-4611
CHARLOTTE, N. C.	1001 Tuckaseegee Rd. Mail: P.O. Box 2144, Charlotte 1, N. C.	8	FRanklin 6-6585	1001 Tuckaseegee Rd. Mail: P.O. Box 2144, Charlotte 1, N. C.	8	FRanklin 6-6585
CHICAGO, ILL.	Suite 904, 165 N. Canal St.	6	DEarborn 2-4712	4201 So. Pulaski Rd.	32	CLiffside 4-6161
CINCINNATI, OHIO	990 Nassau Street	6	PLaza 1-0411	49 Central Ave.	2	GArfield 1-6810
CLEVELAND, OHIO	12910 Taft Ave. Mail: P.O. Box 2494, Cleveland 12, Ohio	8	LIberty 1-1700	12910 Taft Ave. Mail: P.O. Box 2422, Cleveland 12, Ohio	8	LIberty 1-1700
COLUMBUS, OHIO	766 Northwest Blvd.	—	294-4115	Cleveland Serv. Dist., 12910 Taft Ave., Cleveland 8, Ohio Mail: P.O. Box 2422, Cleveland 12, Ohio		LIberty 1-1700
DALLAS, TEXAS	6500 Cedar Springs Rd.	35	FLeetwood 1-3725	6500 Cedar Springs Rd. Mail: P.O. Box 35425	35	FLeetwood 1-3725
DAYTON, OHIO	225 N. Wilkinson St.	2	BAldwin 3-5286	Cincinnati Serv. District, 49 Central Ave., Cincinnati 2, Ohio	—	GArfield 1-6810
DENVER, COLO.	6501 E 44th Ave.	16	DUdley 8-4611	6501 E. 44th Ave.	16	DUdley 8-4611
DETROIT, MICH.	820 Fisher Bldg.	2	874-1400	1448 Wabash Ave.	16	WOodward 2-9650
EL PASO, TEXAS	5712 Trowbridge	—	PRospect 2-7502	Dallas Service Dist., 6500 Cedar Springs Rd. Mail: P.O. Box 35425, Dallas 35, Texas	—	FLeetwood 1-3725
EXETER, N. H.	40 Washington Street	—	PResident 2-2368	Boston Service Dist., 50 Industrial Place, Newton Upper Falls, 64, Mass.	—	DEcatur 2-6200
HOUSTON, TEXAS	5534 Armour Drive	20	WAlnut 3-2549	5534 Armour Dr., Mail: P.O. Box 18265 Houston 20, Texas	—	WAlnut 3-2549
INDIANAPOLIS, IND.	3333 N. Meridian	8	WAlnut 4-5638	Cincinnati Service Dist., 49 Central Ave., Cincinnati 2, Ohio	—	GArfield 1-6810
N. KANSAS CITY, MO.	200 East 16th Ave.	16	GRand 1-3568	200 East 16th Ave.	16	GRand 1-3568
LOS ANGELES, CALIF.	2747 S. Malt Ave.	22	RAymond 3-2541	2747 S. Malt Ave.	22	RAymond 3-2541
LUBBOCK, TEXAS	520-23rd St., P.O. Box 578	—	POrter 3-6039	Dallas Service Dist., 6500 Cedar Springs Rd., Mail: P.O. Box 35425, Dallas 35, Texas	—	FLeetwood 1-3725
MEMPHIS, TENN.	1179 Morehead St.	7	JAckson 3-1441	1179 Morehead St.	7	JAckson 3-1441
MERIDEN, CONN.	555 East Main Street	—	BEverly 5-2705	New York Service Dist., 75–11 Woodhaven Blvd., Glendale 27, N. Y.	—	TWining 6-6000
MIAMI, FLA.	P.O. Box 12	43	PLaza 7-8481	1310 N.W. 74th St., Mail: P.O. Box 47-796	—	PLaza 7-8481
MILWAUKEE, WIS.	5300 N. Sherman Blvd.	9	HOpkins 2-3860	5300 N. Sherman Blvd.	9	HOpkins 2-3860
MINNEAPOLIS, MINN.	500 Stinson Blvd.	13	STerling 9-7286	Northwestern Terminal Bldg., 500 Stinson Blvd.	13	STerling 9-7286
MOORHEAD, MINN.	1717 5th Street, South	—	CEdar 3-1637	Minneapolis Serv. Dist., Northwestern Terminal Bldg., 500 Stinson Blvd., Minneapolis 13, Minn.	—	STerling 9-7286
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NEW YORK, N.Y.	570 Lexington Ave.	22	PLaza 1-1311	75-11 Woodhaven Blvd., Glendale, N. Y.	27	TWining 6-6000
NEWARK, N. J.	New York Sales Office, 570 Lexington Ave., New York 22, N. Y.	—	PLaza 1-1311	133 Boyd Street	3	BIgelow 3-4500
OAKLAND, CALIF.	999-98th Ave.	3	LOckhaven 9-3422	999–98th Avenue	3	LOckhaven 9-3422
OKLAHOMA CITY, OKLA.	6715 No. May St., P.O. Box 7711	—	VIctor 2-4028	Dallas Serv. Dist., 6500 Cedar Springs Rd., Mail: P.O. Box 35425, Dallas 35, Texas	—	FLeetwood 1-3725
PHILADELPHIA, PA.	Rt. 202, At Expressway, P.O. Box 525, King of Prussia, Pa.	—	MUrray 8-5900	Rt. 202, At Expressway, P.O. Box 525, King of Prussia, Pa.	—	MUrray 8-5900
PHOENIX, ARIZONA	P.O. Box 189	1	ALpine 2-6231	Los Angeles Serv. Dist., 2747 S. Malt Ave.	22	RAymond 3-2541
PITTSBURGH, PA.	238 W. Carson St.	19	GRant 1-9050	238 W. Carson St.	19	GRant 1-9050
PORTLAND, MAINE	P.O. Box 1096	1	781-2043	Boston Service Dist., 50 Industrial Place, Newton Upper Falls, 64, Mass.	—	DEcatur 2-6200
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